*California Department of Forestry and Fire Protection*

*Santa Clara Unit*

# Fire Management Plan

# 2004

*"Your Land…..*

*Your Community…..*

*Your Decision….."*

Education
Engineering
Enforcement
Prefire Planning
Fire Safe Council
Vegetation Management
Volunteers In Prevention

# Signature Page

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California Department of Forestry and Fire Protection
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**Introduction Page**

The Santa Clara Unit is unique to the Department of Forestry and Fire Protection, located between the east side of the San Francisco Bay and the western Sacramento / San Joaquin valley, encompassing the Counties of Contra Costa, Alameda, Santa Clara, and western portions of Stanislaus and San Joaquin. There are a total of 1.3 million acres of direct protection area within the unit, and a combined population of 5.4 million people and are covered by Valley Air Quality Management and Bay Area Air Quality Management Districts that the Units management staff work closely with to reduce smoke plume impact of our Vegetation Management program and wildland fire activity upon the local population.

The major population centers include the cities of San Jose and the surrounding, "Silicon Valley," Oakland, Berkley, Livermore/Pleasanton, Walnut Creek, Concord, Martinez and Richmond. Numerous major highways run through the unit and daily traffic congestion is a constant within the unit. Technology, manufacturing, heavy industry, three major sea ports, and three major airports all drive a large portion of the 5$^{th}$ largest economy in the world. Given the large population concentration in the unit recreational use and open space preservation issues are constantly being addressed

Vegetation types in the unit range from annual grasses and brush in the eastern areas to large 80 plus year old brush fields and Costal Redwood on the western edge of the unit. Recent large damaging fire's include the Lexington Fire (1985 13,128 ac), the Tunnel Fire (1991 1624 ac, 25 deaths and 3500 structures) the Croy Fire (2002 3007 ac and 300 structures) and the Santa Clara Complex (2003 32,000 ac). With the current population levels in the unit and the intrusion of urban development into wildland, the Santa Clara Unit is taking every opportunity to be pro-active wildland fuels management. The unit is heavily involved in fire protection planning programs with our local cooperators to address existing problems, and identify areas where we can implement changes early in the planning stages. The Santa Clara Unit is located in an active earth quake fault area, as evidenced by the 1989 Loma Prieta earthquake, which the unit was heavily involved in the emergency response to.

Two Fire Safe Council's, Santa Clara Fire Safe, Diablo Fire Safe, and a working group formed after the Tunnel Fire to address projects in the local jurisdictions in the East Bay Hills interface areas, the Hills Emergency Forum are involved with fire safety and planning in the five county area. With input and cooperation from these groups, and the other stakeholder groups, the Unit managers establish goals and projects in the unit Fire Management plan to reduce the threat of large damaging fires. The document is the units' template for fuels reduction projects to pending, completed, and for general public review, and comment. The units Fire Plan allows us to respond to the needs and concerns of the public and identifies projects to be funded through cooperative grants and donations.

Through the use of this Fire Management Plan the Santa Clara Unit is working to reduce unplanned ignitions within the unit, limit damage caused by uncontrolled fires, through the use of education, pre fire mitigation projects, patrol, and law enforcement to meet the mission statement of the Department of Forestry and Fire Protection.

## Executive Summary

The Santa Clara Unit Fire Management Plan documents the assessment of the fire situation in the unit, includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work with the local fire problem.

Responsibility for Pre Fire Engineering and Fire Protection Planning falls under the direction of the Fire Prevention Bureau. Pre Fire Engineering includes GIS mapping of assets at risk, wildland fuel belts, and the maintenance of various other GIS data layers to assess the existing levels of wildland protection services, identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires, rank these areas in terms of priority needs, and prescribe what can be done to reduce future costs and losses.

The assessment system has four components:

- Level of Service (LOS)
- Assets at Risk (AAR)
- Hazardous Fuels
- Historic Fire Weather

This plan will utilize the five strategic objectives and Fire Plan Framework identified in the California Fire Plan and incorporates them into the planning and implementation process. The five objectives and framework components of the Santa Clara Fire Management Plan are as follows:

- **Wildfire Protection Zones**
  To create wildfire protection zones that reduces the risks to citizens and firefighters.

- **Initial Attack Success**
  Assess wildfire initial attack successes on lands of similar type. This is measured in terms of a percentage of fires that are successfully controlled before unacceptable costs and losses occur. The analyses can be used to determine the department and unit's level of service.

- **Assets Protected**
  The plan has utilized a methodology for defining assets protected and their degree of risk from wildfire. The assets addressed in the plan are citizen and firefighter safety, watersheds and water, timber, wildlife and habitat (including rare and endangered species), rural communities, unique areas (scenic, cultural, and historic), recreation, range, structures, and air quality. Stakeholders for each of the assets at risk are identified. The assessment will enable the Unit and other fire service managers to set priorities for fire management project work.

- **Fire Management Prescriptions**
  The fire management aspect focuses on alternatives to protect assets at risk. Projects include a combination of fuels modification, ignition management, fire-safe engineering activities such as regulation and zoning, educational programs, public information and road accessibility, department infrastructure including fire stations and water systems, alarms, and forest health. Pre Fire management prescriptions designed to protect these assets will also identify those who benefit and who should share in the project costs.

- **Fiscal Framework**
  The California State Board of Forestry and Fire Protection and CDF are developing a fiscal framework for assessing and monitoring annual and long term changes in California's wildland fire protection systems.

- **Applications of the Fire Plan Framework**

  - Identify for state, federal, local officials and the public those areas of concentrated assets and high risk.

  - Allow the Santa Clara Unit to create a more efficient fire protection system, focused on meaningful solutions for identified problem areas.

  - Give citizens an opportunity to identify public and private assets to design and carry out projects to protect those assets.

  - Identify, before fires start, where the most cost effective pre-fire and fire management investments can be implemented.

  - Encourage an intergovernmental approach to reducing costs plus losses.

  - Enable policy makers and the public to focus on what can be done to reduce future costs plus losses from wildfire.

  - Through the land use and safety element of the Santa Clara, Alameda, Contra Costa, San Joaquin and Stanislaus County's general plan, incorporate elements of the California Fire Plan so that the county plan's support the state plan.

## Stakeholders

Stakeholders are defined as any person, agency or organization with a particular interest, a stake, in fire safety and protection of assets from wildfires. The Santa Clara Unit has made a considerable attempt at involving stakeholders and many of their interests in the planning of the Santa Clara Fire Management Plan. The process of identifying stakeholders and their interests is an ongoing process and will be evaluated continuously through the evolution of future pre-fire management plans. It is the goal of the Santa Clara Unit to participate with as many stakeholders as is possible and to continually update planning efforts involving stakeholder input.

There are three primary stakeholder groups within Santa Clara Unit. They are the Santa Clara County Fire Safe Council, Diablo Fire Safe Council and the Hills Emergency Forum, a working group formed after the Tunnel Fire consisting of the communities, public agencies and homeowner groups within or near the East Bay Hills. These groups are instrumental in bringing a conglomeration of stakeholders to “the table”. This helps to shed light on many concerns within communities and expose information relating to the effectiveness of the Santa Clara Units fire safe efforts. The Unit is able to respond and adapt activities to address many of the concerns from the different stakeholders involved with these groups. Through the diversity of the membership Santa Clara Unit and our cooperators have been able to develop pre-fire and fire prevention projects that otherwise may never have developed.

## Fire Safe Councils

**Diablo Fire Safe Council**
www.diablofiresafe.org
Contact: Amber Bach, Executive Coordinator
C/O Amphion
1404 Franklin Street #300
Oakland, CA 94612
Phone: (510) 893-9888
Fax: (510) 893-9887
Email: diablofiresafecouncil@hotmail.com

**Santa Clara County Fire Safe Council**
www.sccfiresafe..org
Contact: Jan Cokely
Council Coordinator
15670 Monterey Road
Morgan Hill, CA 95037
Phone: (408) 975-9591

**Hills Emergency Forum**
www.lbl/ehs/hef
Contact: Cheryl Miller, Staff Support Coordinator
C/O Amphion
1404 Franklin Street # 300
Oakland Ca. 94612
Phone: (510) 893-9888
Fax: (510) 893-9887

## Stakeholder Groups

**Local and regional fire departments:**

- Alameda County Fire Department
- California Department of Fire and Forestry
- City of Alameda Fire Department
- Albany Fire Department
- Berkeley Fire Department
- Contra Costa County Fire District
- Emeryville Fire Department
- Fremont Fire Department
- Hayward Fire Department
- Kensington Fire Protection District
- Livermore-Pleasanton Fire Department
- Menlo Park Fire Department
- Moraga-Orinda Fire District
- Mountain View Fire Department
- Newark Fire Department
- Northern California Fire Prevention Officers
- Oakland Fire Department
- Palo Alto Fire Department
- Piedmont Fire Department
- Pinole Fire Department
- Richmond Fire Department
- Rodeo-Hercules Fire Department
- Santa Clara County Fire Department
- San Jose Fire Department
- San Ramon Valley Fire Protection District
- Saratoga Fire Department
- Sunnyvale Department of Public Safety
- Union City Fire Department

**Fire Professionals**:

- Wildland Resource Management
- Safe Solutions
- Shelterbelt Builders
- Bay Area Plant Consultants

**Community Colleges**

- Merritt College

**Political affiliates**

- Senator Don Perata
- Congressman Richard Pombo
- Congresswoman Ellen Tauscher

**Insurance Organizations**

- Safeco Insurance
- Fireman's Fund Insurance
- Insurance Information Network of California

**Emergency Services Organizations**

- Alameda County Sheriff's Office of Emergency Services
- Contra Costa County Sheriff's Office of Emergency
- Hills Emergency Forum

**Research Laboratories**

- UC Forest Products Lab
- UC Berkley
- Lawrence Berkley Laboratory
- Lawrence Livermore Laboratory

**Land Management Agencies**

- East Bay Regional Park District
- Mount Diablo State Park
- Contra Costa County Resource Conservation District
- Alameda County Resource Conservation District
- Mid Peninsula Open Space
- East Bay Municipal Utilities District
- Santa Clara Valley Open Space
- Santa Clara Valley Water Agency
- San Jose Parks and Recreation
- Santa Clara County Parks and Recreation
- Contra Costa Water Agency
- California State Parks and Recreation

**Community Organizations**

- North Hills Phoenix Association
- Claremont Canyon Conservancy
- Hiller Highlands
- Panoramic Hills Association
- Friends of Temescal Creek
- Friends of Sausal Creek
- Montego Road Home Owners Association
- Alum Rock Area Homeowners Group

**Others**

- Bay Area Quality Management District
- Cal Trans
- North Hills Landscape Committee
- Vegetation Management Video Committee
- U.S. Fish and Wildlife Service
- Pacific Gas and Electric

## Assets at Risk

The primary goal of wildland fire protection in the Santa Clara Unit is to safeguard the wide range of assets found within the unit from the effects of wildfire. The assets at risk are the public and private assets that the wildland fire protection system is created and funded to protect. The following have been identified as assets at risk from wildfires and delineates their economic and non-economic assets: people, structures, timber, watershed, wildlife, unique scenic and recreation areas, range, wildlife, and air quality. The table below provides a description of the assets evaluated.

| Asset at Risk | Public Issue Category | Location and ranking methodology |
|---|---|---|
| Fire-flood watersheds | Public safety<br>Public welfare | Watersheds with a history of problems or proper conditions for future problems, ranked based on affected downstream population |
| Soil erosion | Environment | Watersheds ranked based on erosion potential |
| Water storage | Public welfare | Watershed area up to 20 miles upstream from water storage facility, ranked based on water value and dead storage capacity of facility |
| Water supply | Public health | 1) Watershed area up to 20 miles upstream from water supply facility (High rank); 2) grid cells containing domestic water diversions, ranked based on number of connections; and 3) cells containing ditches that contribute to the water supply system (High rank) |
| Scenic | Public welfare | Four mile view shed around Scenic Highways and 1/4 mile view shed around Wild and Scenic Rivers, ranked based on potential impacts to vegetation types (tree versus non-tree types) |
| Timber | Public welfare | Timberlands ranked based on value/susceptibility to damage |
| Range | Public welfare | Rangeland ranked based on potential replacement feed cost by region/owner/vegetation type |
| Air quality | Public health<br>Environment<br>Public welfare | Potential damages to health, materials, vegetation, and visibility; ranked based on vegetation type and air basin |
| Historic buildings | Public welfare | Historic buildings ranked based on fire susceptibility |
| Recreation | Public welfare | Unique recreation areas or areas with potential damage to facilities, ranked based on fire susceptibility |

| Asset at Risk | Public Issue Category | Location and ranking methodology |
|---|---|---|
| Structures | Public safety<br>Public welfare | Ranked based on housing density and fire susceptibility |
| Non-game wildlife | Environment<br>Public welfare | Critical habitats and species locations based on input from California Department of Fish and Game and other stakeholders |
| Game wildlife | Public welfare<br>Environment | Critical habitats and species locations based on input from California Department of Fish and Game and other stakeholders |
| Infrastructure | Public safety<br>Public welfare | Infrastructure for delivery of emergency and other critical services (e.g. repeater sites, transmission lines) |
| Ecosystem Health | Environment | Ranking based on vegetation type/fuel characteristics |

The assets at risk were evaluated to the 450-acre scale within the Santa Clara Unit. The Department for purposes of manageability has designated the 450-acre scale. The 450-acre cells have been designated as Quad 81$^{st}$. This designation is based on the sectioning of a USGS 7.5 minute quadrangle map broken down into a 9x9 grid pattern; the result is squares of 450 acres. Fire plan assessments have been made at the Q81st level, for instance, each Q81st in Santa Clara Unit has a ranking applied to it for Level of Service (LOS), Assets at Risk (AAR), fuel hazards, etc. The Santa Clara unit has 5472 of these Q81 cells. While updating the asset values during this planning cycle the unit's staff found approximately three quarters of these cells had not been assigned the base numeric value to allow the calculator to assign the proper values. The unit is working with the Fire and Resource Assessment Program GIS analysts and Sacramento Fire Plan staff to automate this procedure to streamline the entire process. These updates should be available for use in time for the next annual review due in June of 2005.

Fire protection resources are limited, primarily by budget constraints. Therefore, these resources should be allocated, in part, based on the magnitude of the assets. The assets are ranked, high, medium and low, as to their susceptibility to wildfire. The ranking is scaled to the Q81st and transferred to GIS maps. The map overlays have been evaluated by Unit staff through a series of meetings, through which identification of the areas with the highest combined asset values, map overlays and fire risk will be targeted for fire management activities. The scores for the various assets at risk where given a 1 (low) score out of a possible 9.999 (high) except for the following assets: Game wildlife, historical buildings, housing/structures, and ecosystem health were all given scores of 0 as the data is not yet available or in different stages of validation at a state level. Infrastructure, non-game wildlife, range scores were given a score of 2 and timber was given a 3 (See priority areas in the Santa Clara Unit fire plan). Many factors are involved in target area identification, including political climate of the region and suppression cost reductions.

The process of explicitly enumerating assets at risk also helps to identify who benefits from those assets. It is a premise of the California Fire Plan, on which this plan is structured, that those who benefit from the protection of an asset should pay for that protection.

## General Description of the Current Fire Problem

The Santa Clara Unit does not fight fire alone. The Unit has local government agreements administered by the Unit. The Unit also cooperates fully with federal and local government firefighting agencies in addition to the Governor's Office of Emergency Services. This cooperation is formally defined and authorized in interagency agreements. These include Federal agencies, the Master Mutual Aid Agreement, and local fire control agencies through mutual aid and cooperative agreements, in the form of mutual threat zones, with all of the city and county fire departments within the five counties. These cooperative efforts of the fire service providers comprise the entire fire protection delivery system within Santa Clara Unit.

### LEVEL OF SERVICE RATING

The legislature has charged the Board of Forestry and CDF with delivering a fire protection system that provides an equal level of protection to lands of similar type (PRC 4130). To do this, CDF needs an analysis process that will define a level of service rating that can be applied to the wildland areas in California to compare to the level of fire protection being provided. The rating is expressed as the percentage of fires that are successfully attacked. Success is defined as those fires that are controlled before unacceptable damage and cost are incurred.

California has a complex fire environment and CDF data on assets at risk to damage from wildfire is incomplete. These factors combine to make it very difficult to develop a true performance-based fire protection planning system. CDF has resorted to prescription-based fire protection planning (travel times of firefighting resources to incidents, report times for the detection system, the same acreage goal statewide, etc.) as a way to overcome the complexity of the issues. Prescription-based planning is possible but tends to oversimplify some issues. Prescription standards also make it difficult to integrate the interrelationships of various fire protection programs, such as the value of fuel-reduction programs in reducing the level of fire protection effort required.

The following approximation method is proposed to overcome these shortcomings and allow the unit to proceed with a damage-plus-cost analysis of fire protection performance. This is a relative system, attempting to measure the relative impact of fire on the various assets at risk. At the same time, this process produces a level of service rating (LOS). The rating can be used to describe fire protection services to "civilian stakeholders". The level of service rating also provides a way to integrate the contribution of various program components (fire prevention, fuels management, engineering and suppression) toward the goal of keeping damage and cost within acceptable limits. It is important to reiterate that this system is relative system and that the ratings are only

approximations. In this system, a fire may be considered a failure based on the firefighting resource draw and size of fire, however, the final fire size and assets protected may have been a true success based on firefighting activities in extreme fire weather conditions.

The Level of Service (LOS) rating is a ratio of successful fire suppression efforts to the total fire starts, a method to measure initial attack success and failure rates throughout the Unit and is based on fire sizes. The LOS uses a Geographic Information System (GIS) that overlays a 20-year history of wildfires onto a map and derives the average annual number of fires by size, severity of burning and assets lost from data entered in the Departments Emergency Activity Reporting System. This data provides a LOS rating, in terms of a success and failure calculation.

Success Rate equals the annual number of fires extinguished by initial attack (relatively small sized) divided by the total number of fires. If all the fires in a given fuel type are extinguished in small acreages that is considered a 100% success rate for that fuel type (planning Belt)

The result is an initial attack success rate in percentage of fires by vegetation type and area. Success is defined as those fires that are controlled before unacceptable damage and cost are incurred and where initial attack resources are sufficient to control wildfires.

The Fire Plan Ignition Workload Assessment map is designed to show effectiveness of the suppression organization in meeting the initial attack fire workload. The attempt at controlling fires before they become large and costly is evaluated in this assessment. The underlying assumption is that fires, successfully contained in the initial attack stages, are not the primary problem. Problem fires are the few that are costly to control or exceed suppression organization capabilities and cause damage.

Fires are grouped into "success" and "failure" categories based on various factors. The assessment groups fires by general vegetation or fuel types (planning belts). Within the fuel type, fires are further classified based on final fire size and weather conditions at the time of ignition. Each fire is classified and labeled as either a successful initial attack or a failure.

The initial attack workload assessment is displayed in the maps below and statistical data related to these maps. Initial attack points of origin are plotted and color-coded based on success/failure scores. Some of the successes and failures are not matched with weather readings and are shown on this analysis. Further validation will be conducted to match weather with the ignitions in the future. The workload can be summarized in the Quad 81$^{st}$ grid. Results can also be summarized into a percentage success score and displayed by Quad 81$^{st}$ grid. Combining fire business workload patterns with aggregated assets at risk can be useful in defining target areas for focusing Pre-fire Management project efforts.

## Initial Attack Success and Failures

Analyses time period includes January 1981 through December of 2003. The following planning belt vegetation types were analyzed.

| Planning Belt | Success Rate | Successful I.A. | I.A. Failure |
|---|---|---|---|
| Coastal Conifer | 98% | 81 | 2 |
| Woodland | 96% | 65 | 3 |
| Grass | 90% | 1600 | 178 |
| Interior Conifer | 91% | 174 | 17 |
| Brush | 68% | 30 | 14 |
| Unclassified | 94% | 756 | 48 |

Because of changes in the GIS mapping software, better data entry, changes in the fuels layers and severe weather reporting stations and other problems identified during the writing and data collection of this document the Initial Attack Success / Failure component is not a true representation of certain planning belts. Time constraints did not allow for the correction of this data in time for this report but staff is working on the fixes for next years report.

## Fuels


The fuels assessment layer is valuable for explaining much of the local situation. This layer can help focus attention on solutions.

The fuels assessment considers current flammability of wildland fuels, given location on the slope, average bad weather conditions, ladder fuels, and crown density.

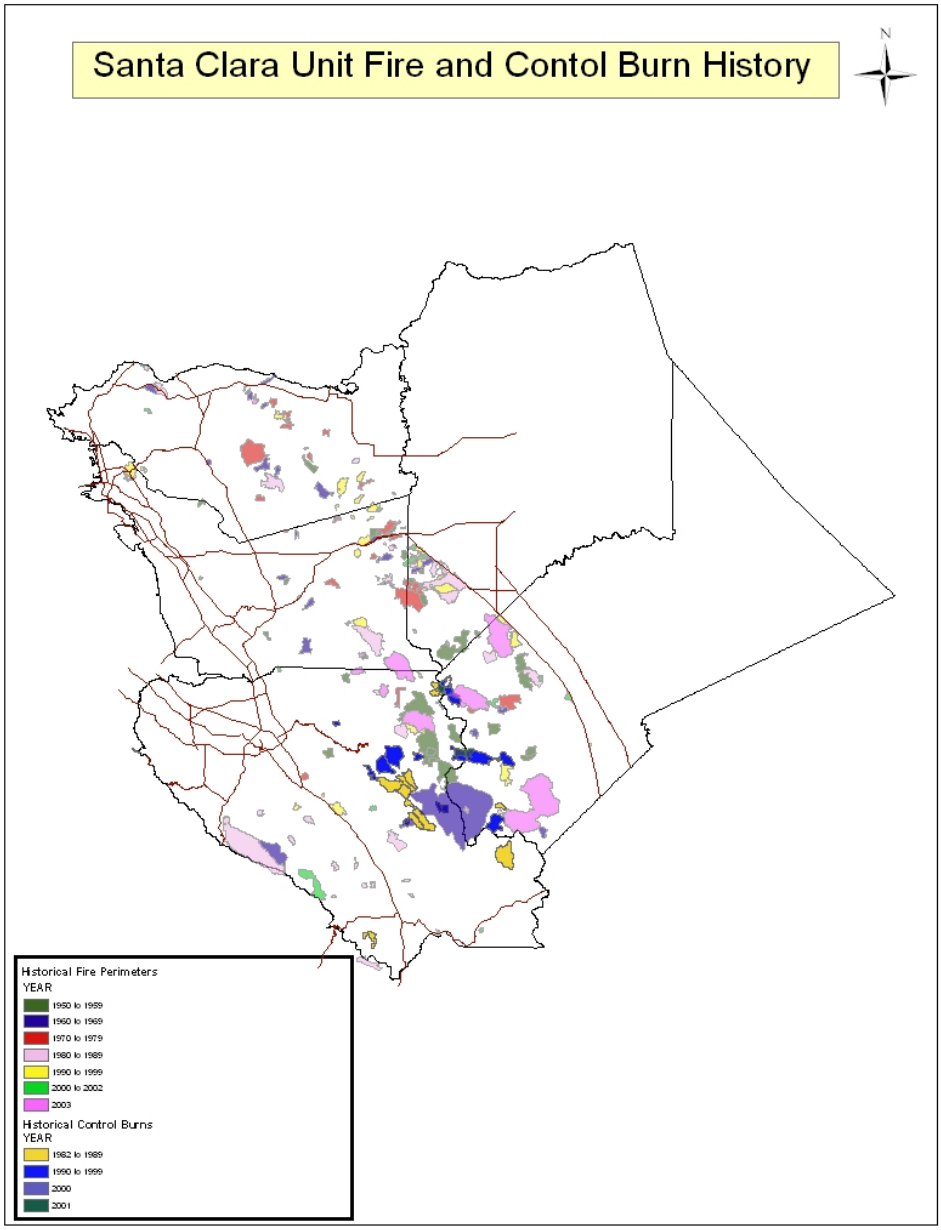
Fuel, in the context of wildland fire, refers to all combustible material available to burn on an area of land. Grass, brush and timber are the most common fuels found in our mountain ecosystem.

### HAZARDOUS FUELS ASSESSMENT

Arrangement is critical in wildland fire behavior, for it dictates how a fire spreads. Un-compacted fuels, such as grass, spread fire rapidly since more of its surface can be heated at one time. Compacted fuels, such as pine litter, burn slower because heat and air only reaches the top of the fuel. Vertical arrangement refers to a fuel's ability to spread upward into treetops. These are called ladder fuels and are influential factors on fire spread. The ignition of ladder fuels allows the fire to spread from the ground into the treetops. Crown or canopy refers to the tops of trees and is very important in stands of burning timber. A fire once introduced by ladder fuels to the tops of dry conifers can spread as rapidly as a grass fire from treetop to treetop.

The current fuels layer is a product of a GIS mapping project and a fuel survey and cataloging program using aerial photography and ground survey of the areas completed in the mid 1990's. While this data is still somewhat current it is need of updating. Other areas that have been identified within the fuels category are; the lack of a definitive fuel type representing housing or buildings as a fire carrying fuel type, the narrowness of the crown score rankings. When the crown score is factored into the assessments it is only for one fuel type, Interior Conifer (Pine trees), and the percentage of time when that given fuel type will promote and sustain a running crown fire. While this type of fire is very rare in the Santa Clara Unit, as well as much of the rest of the state, the fact remains that while not producing the same visual image as a running timber crown fire other fuel types also can, and do on a much more common basis, a type of crown fire. Given these facts, and the lack of money to accomplish the needed updates of the fuels layers by the Fire and Resource Assessment Program, the unit's Pre Fire Engineer has been trying to secure a stable funding source to accomplish these goals.

## Fire History




Wildfire history is a significant factor of the pre-fire management planning process. The fire plan assessment framework incorporates detailed information for determining the most beneficial locations for pre-fire management projects, an idea of the level of service on SRA for the unit and various assets at risk information. Fire history is a piece of the puzzle that allows unit personnel to learn from our past and make an attempt to prepare for future fire behavior. Having knowledge of fire history provides an account of historic fire travel in a particular area. Armed with knowledge of historic fire spreads, fire suppression forces are better equipped to predict fire spread potentials. Identifying where the largest and most damaging fires have occurred is a necessary step in preparing for future wildfire. The most significant aspect of fire history in Santa Clara Unit is that personnel are able to compare the relationship between identified assets at risk and the historic burning patterns of wildfire which allows for a more informed decision making processes when preparing fire planning documents and procedures. Below is the wildfire history for Santa Clara Unit between 1900 and 2003. The maps display significant patterns that are used in pre-fire planning process.

## Frequency of Severe Fire Weather

### Description of Severe Weather Analysis

Severe fire weather is defined using the Fire Weather Index (FWI) developed by the USDA Forest Service Riverside Fire Lab. The FWI combines air temperature, relative humidity, and wind speed into a one number score. The FWI gives wildland fire managers an index that indicates relative changes in fire behavior due to the weather (fuel and topography conditions are not included in the calculation). Severe fire weather occurs when the FWI, calculated from the hourly weather measurement, exceeds a predetermined threshold. The threshold FWI is derived from average bad fire weather of (approximately) 95° F, 20% relative humidity, and a 7 mph eye-level wind speed. Frequency of Severe Fire Weather is defined as the percent of time during the budgeted fire season that the weather station records severe fire weather. Individual weather stations are ranked as low, medium, or high frequency of severe fire weather. This ranking can then be applied to the area on the ground represented by the weather station. Because of the incredible surge in housing developments in the unit some of our weather stations have been surrounded by houses, decreasing their usefulness as a fire weather reporting station. The ECC, Fire Prevention, and Volunteers in Prevention staff are in the process of moving one station, Livermore, and placing a new station in the Altamont Pass in a cooperative project with the wind generator consortium

**Severe Weather Analysis Parameters**

| FWI CUTOFF | START LOW RANK | START MED RANK | START HIGH RANK |
|---|---|---|---|
| 29.725 | 0% | 5% | 20% |

| STATION | OWNER | LAT | LON | ELEV | WXSCORE % | WXRANK |
|---|---|---|---|---|---|---|
| Diablo Grande | CDF | 37.320 | 121.290 | 1850 | 0.56 | Low |
| Livermore | CDF | 37.710 | 121.810 | 800 | 12.56 | Med |
| Los Banos | CDF | 37.050 | 121.030 | 350 | 6.51 | Med |
| Black Diamond | EBRP | 37.950 | 121.880 | 1600 | 11.89 | Med |
| Briones | EBRP | 37.930 | 121.110 | 1450 | 2.50 | Low |
| Calaveras Road | EBRP | 37.440 | 121.770 | 1230 | 4.18 | Low |
| Las Trampas | EBRP | 37.830 | 122.060 | 1760 | 11.74 | Med |
| Rose Peak | EBRP | 37.500 | 121.730 | 3060 | 1.22 | Low |
| Mallory Ridge | ConWater | 37.810 | 121.770 | 2040 | 2.94 | Low |
| Oakland North | Oakland Fire | 37.870 | 122.210 | 1300 | 3.75 | Low |

**Wx SCORE**

The percent of time a weather station is experiencing severe weather. Non-fire season data is thrown out at this point. The assumption is that during winter the fuels aren't ready to burn regardless of the weather.

**Wx RANK**

The Wx SCORE intensity rating is lumped into three categories to create a severe fire weather frequency ranking

## Projects and Priority Areas

The following pages contain the Field Battalions lists of projects and goals for the implementation of the Santa Clara Units Fire Management Plan, the “Meat and Potatoes.” They are complied by the field Battalion Chiefs with input from the units Pre Fire Engineer, Fire Safe Councils, Stakeholders, and the general public through Community outreach. While they reflect an amazing cross section of goals and ideas, they are not inflexible or cast in stone, nor are they the only options available to mitigate a problem. These are suggestions and a starting point for the journey, not the end point.

***Battalion One: (Morgan Hill)***

**Purpose Statement:**

Battalion One comprises the State Responsibility Area (SRA) located around the United Technologies Corporation property in the northeast to Uvas Road in the northwest; the Henry Coe State Park and private ranches east of The County Line Road; the Highway 152 corridor- from Dinosaur Point to Dunne Hill and the Hecker Pass Hwy to the Santa Cruz County line. Historically, the major wildland fire occurrence has been in the remote and sparsely populated eastern portion of the battalion, the 1936 Fire and the 1961 Bollinger Ridge Fire are the largest fires recorded in the Santa Clara Unit. The 2003 Fire Statistics are consistent with previous years with equipment use being the leading cause for preventable wildland fires. Battalion One, because of its unique combination of vegetation, topography, climate and population, has one of the most severe wildland problems in the San Francisco Bay Area. Wildland and urban interface, rugged terrain and highly flammable vegetation coupled with high winds make the South Santa Clara County foothills especially unsafe for development unless adequate fire safe measures are taken. Without regard for wildland fire protection and water sources, continued development in the SRA will heavily impact fire protection and emergency medic services. Solutions center on designing an acceptable level of risks for firefighters and residents that measure all elements of that risk. Pre-fire planning, mutual aid agreements, standard response plans and high fire behavior warnings are necessary elements to measure the risks to reduce losses from wildfires.

**Objectives:**

1. Improve awareness and involvement between the Santa Clara Fire Safe Council and South Santa Clara County communities beginning at the station level.
2. Continue hazard reduction inspections (LE38 Inspections) for structures with Volunteers In Prevention (VIP).
3. Continue input on all new construction and developments with the Santa Clara County Fire Marshall's office.
4. Install and maintain a Remote Fire Weather Station (RAWS) in the foothills east of South Santa Clara County basin when funding becomes available.
5. Participate in all local community activities (i.e. Back Country Event, Renaissance Fair, Indian POW WOW, and Tarantella Festival)
6. Continue assistance for Henry Coe State Park, United Technologies Corporation and private ranchers in fuel modification projects.

**Priority Areas:**

1. Ormsby Lane and laterals roads
2. Gilroy Hot Springs Road
3. Canada Road to Jamieson Canyon Road
4. Estates Drive
5. County Line Road and Lateral road systems

**Action Plan:**

1. Establish 2nd year follow up on Ormsby Lane and laterals roads, Gilroy Hot Springs Road, Canada Road to Jamieson Canyon Road, and Estates Drive as the 2004 Hazard Reduction target areas for VIP inspections and collection of data related to:
2. Roof Types
3. Water Sources and capacities
4. Wildland Fuel Types near residences
5. Address Numbers
6. Provide general fire prevention contacts and programs to local groups and schools.
7. Maintain the Fuel Break Clearance and road maintenance along The County Line Road.
8. Establish a Fuel Break along Bollinger Ridge and Castle Ridge to The County Line Road.
9. Pre-fire planning of Henry Coe State Park- the second largest state park in California, Santa Clara County Parks, Indian POW WOW, and the Renaissance Fair.
10. Assist CAL-TRANS in emergency response time changes affecting the planned westbound overpass connection of Hwy 152 and Hwy 156 junction.
11. Update agreements between CDF and Henry Coe State Park's Wildfire Management Plan (Local Operational Plan).
12. Obtain and install Fire Safe Signs to be located on eastbound Hwy 152 near the Casa De Fruta community were the Indian POW WOW (daily estimated of 2,000 people) and the Renaissance Fair (weekend daily estimated of 6,000 people) are occurring during the fire season. And, routine eastbound vehicle traffic has been estimated by the California Highway Patrol as 2,500 vehicles per hour during the weekend.

***Battalion Two: ( San Jose)***

**Purpose Statement:**

The San Jose Battalion consists of those areas deemed to be State Responsibility Area in northern and eastern Santa Clara County including the cities of San Jose and Milpitas with an approximate population of 1.5 million people. Historically fires occurred in the lightly populated eastern San Jose foothills and the sparsely populated Mt Hamilton and Isabel Valley areas. The city of San Jose has annexed large parcels of land over the last 10 years increasing the Wildland Urban Interface problem in the western and eastern foothill regions. With the increase of homes and people in the Battalion there has been an increase in the number of fires. The automatic aid and closest resource agreements in place with San Jose Fire Department have helped in containing the majority of these fires in the initial attack stages, but the potential for a large damaging fire to originate in the sparsely populated eastern county during a north wind event is of great concern to the unit and Battalion personnel.

**Objectives:**

1. In the *VHFHS* areas we desire to lower the relatively heavy fuel loadings in the area, creating more open space, raising the tree limb/debris level off of the ground and creating more open and aesthetic areas that are more fire safe.

2. In the *HFHSZ* areas we desire to implement fuel breaks to slow the spread of fast-moving grass fires that the area is prone to, creating a more “broken” effect to the visual of the contiguous grasslands.

3. In the *MFHSZ* areas we desire to transition the large contiguous brush fields to more open grasslands.

4. Continue the fuel modification projects in the Battalion

5. Increase public outreach and awareness through the Fire Safe Council.

6. The areas west of US Hwy. 101 in more highly-populated locations will be treated with a low-impact combination of manual tree limbing for ladder fuels reduction, goat grazing for ground fuels limitation and aesthetics, and chipper availability for local stakeholders to dispose of their debris.

7. The designated “*High Fire Hazard Severity Zone”* areas will be treated by the manual creation of fuel breaks, generally 100’ wide that may or may not be shaded, depending upon the input from local landowners and the visual effect on the project area.

8. The designated *Moderate Fire Hazard Severity Zone* areas will be treated under existing CDF VMP program guidelines and contracts to implement brush to grass conversions and fuel loading on a larger scale and a more cost effective basis.

**Priority Areas:**

- The areas of Santa Clara County west of US Highway 101 in the *Very High Fire Hazard Severity Zones* and are the first priority

- *High Fire Hazard Severity Zones* dominate the areas east of US Highway 101 in Santa Clara County up to a large north-south ridge running parallel with the highway and centered at Mt. Hamilton Observatory, a facility of the University of California, Santa Cruz. These areas are the second priority.

- *Moderate Fire Hazard Severity Zones* mark the open brush land that runs from the Mt. Hamilton ridge eastward to the Stanislaus County border. These areas are mostly private cattle ranches and are the third priority.

**Action Plan**

The key to the implementation of the Fire safe Projects in Santa Clara Unit Battalion 2 (San Jose Battalion) has been the partnerships developed within the Santa Clara Fire safe Council. A list of the current active membership of the Council is included as an attachment. Grants have been applied for, awarded, received, and spent as promised under the grant guidelines. Future grants are pending.

**Completed Projects:**

1. Loma Chiquita Chipper – The Santa Clara Fire safe Council funded $8,000 for the placement of a chipper and crew on Loma Chiquita Road in late 2003. Local landowners, many of whom were in the burned/affected area of the "Casa" fire on Sept/Oct of 2002. The grant that funded this work was 01-BLM-0095.

2. Community Outreach and Education – The Santa Clara Fire safe Council funded $2,000 for outreach public information projects including San Jose's "Wildlife Festival", an annual event that hosts nearly 5,000 visitors at Alum Rock Park in eastern San Jose. The Council also participated in other events; the grant that funded this was 01-BLM-0096.

3. Due to the extreme fire situation in both the Santa Clara Unit and southern California last fire season, there were insufficient personnel and equipment to implement the "Brush Mt. VMP", a 750 ac project in the Isabel Valley. We DID do part of the project area and plan on continuing this year.

**Projects Underway:**

1. Montego Road Interface Clearance – This project is funded by the Montego Road Homeowners association under the direction of the Santa Clara Fire safe Council. The MRHA paid for the use of goats to graze the low brushy fuels away from the interface areas in their back yards that border the area of Guadalupe County Park in western Santa Clara County. This is an ongoing project, this year the MRHA requested and will be receiving BLM grant funding to continue and expand the project.

2. Santa Clara County Fire Department Chipper Project – The Santa Clara County Fire Department, a partner in the Santa Clara Fire safe Council, annually funds and provides a chipper to the homeowners in northwestern Santa Clara County in the vicinity of the towns of Los Gatos, Saratoga and Los Altos Hills.

3. Community Outreach and Education – The Santa Clara Fire safe Council has received the first allotment of its new fire safe publication entitled "Living With Fire In Santa Clara County, a guide for homeowners". It is a comprehensive 20 page 8 ½ x 11 guidebook, in color, outlining "defensible space" and "wildland/urban interface" concepts in clear and simple terms for the homeowner. 1,000 of these publications have been issued to fire stations within Santa Clara County, and additional 4,000 will be made available by mid-summer at a cost of $5,000 to the Council. They are funded by a grant, 03-BLM-0071.

4. Crothers Road Fuel break – This project takes the existing Crothers road, east of the city of San Jose and forming the southern boundary of Alum Rock City Park, and widens it to 100' my manually removing, clearing and chipping the vegetation for 40' on either side of the roadway. This project has cleared the legal requirements of San Jose City and is anticipated to begin at the beginning of the summer. The project is funded by the city of San Jose.

5. Grant Ranch County Park VMP – The CDF works with the staff of Grant Ranch County Park, a large county park in the foothills east of San Jose, under VMP program guidelines. 275 acres were burned in 2002, assisting in unwanted non-native intrusive species and star thistle eradication, as well as watershed enhancement and improved fire safety around the adjoining campgrounds. In 2004 the VMP sill also serve as a joint training exercise called "Santa Clara Wildland 2004", which will host fire agencies from as far away as the city of South San Francisco who will be participating in "real time" training during the project. This is schedule for June 9-10, 2004.

**Projected Projects (5 Year Plan):**

1. We are applying for funds to continue the issuance publications as an ongoing community information project. We will be applying for funding from various sources to extend the primary Crothers Road Fuel break project from the vicinity of the park south and east to the homes in the "Peacock Gap" development in the eastern San Jose hills. We will continue to participate in wildlife, watershed and fire safety enhancing project burns thru the CDF's VMP program in the Grant Ranch County Park.

2. The existing projects (Community Outreach and Education, Chipper availability and hazardous fuels reduction) are funded and maintained on an annual basis by the participating agencies and will continue to do so. Requests have been made in the hopes of securing funding for a fuel break that will extend the project area currently maintained in the Montego Road area northward to Battalion #3 in the Los Gatos area
3. We (the San Jose Battalion) are working to implement a project that was abandoned in 1996, the "Isabel Valley VMP". This project was incompletely done and is a large-scale

project (3000 + acres) that has existing roads and control lines and is in the area of the fires of “The Santa Clara Complex” of 2003. Since it is a past, but expired, contract, we hope to be able to do it in the summer of 2005.

***Battalion Three: ( West Santa Clara)***

**Purpose Statement:**
Battalion Three of the Santa Clara Unit incorporates the western portion of Santa Clara County. There are many structures located through out the Battalion. The large population centers, Cupertino, Los Gatos, Saratoga, are within Local Responsibility Area but are in Mutual Threat Zones. The fuels are redwood and mature pine trees on the eastern aspects and brush fields on the Western aspects. The Battalion has grass oak woodland on the lower elevations. There is recent large fire history, The Lexington fire, The Croy fire of which each destroyed numerous homes and valuable watershed.

**Objectives:**

1. Continue with School and special event Fire Prevention Programs in the target areas
2. Aggressively enforce and inspect under Public resources code 4290 and 4291.
3. Support Stakeholder participation in fuels reduction and fire defense activities.
4. Support landowner fuel breaks in conjunction with the Santa Clara Fire Safe council.

**Priority Areas**:

1. The watershed areas of western Santa Clara County including Saratoga, Los Gatos, Summit road, Croy road areas, these areas are becoming more populated. These areas have heavy fuel loading and require fuel modification.
2. Continue the on going fuel modification and working toward a Western Santa Clara County Fuel Break. This will provide an ability to manage fire with a high success rate and keep both the Stakeholders and the Watershed safe.

**Action Plan:**

1. Support the ongoing shaded fuel break in conjunction with the Santa Clara Valley Water District.

2. Assist both Mid Peninsula and the Santa Clara Open Space Districts in planning and implementing fuels reduction on lands they manage in the public trust.
3. Continue to expand the Lexington Basin chipper program to include stakeholders in the Croy Ridge area.
4. Continue to assist and gain stakeholder support of the western Santa Clara County fuel break.
5. Continue with the hazard fuels reduction burning program in the rural western Santa Clara County in conjunction of the Bay Area Air Quality Management District.
6. Strive to insure minimum level of training and protective clothing for all non C.D.F. wild land first responders, this includes the following agencies

   Mid Peninsula Open Space District, Santa Clara Open Space Authority, Santa Clara Valley Water District, California Stare Parks, Santa Clara County Parks and Recreation, Pacific Gas and Electric.

***Battalion Four: (Alameda County)***

**Purpose Statement:**

Battalion 4 of the Santa Clara Unit encompasses those areas of State Responsibility Lands, which lie within the political boundaries of Alameda County. There are a variety of densely populated areas including but not limited to Fremont, Hayward, Pleasanton, Livermore, Oakland-East Bay Hills just to name a few. One will not have to think too far in the past to recall the devastation and the loss of life as a result of the "Tunnel Fire", a Wildland / Urban Interface fire in October 1991. There are also areas of more remote and less populated areas. Many of the structures or residences within Battalion Four have a fair market value of ½ to over 1 million dollars each. The fuel types are predominately annual grasses, brush, and Oak Woodland. Due to the proximity of the San Francisco Bay and the Altamont Pass, weather conditions can lead to intense burning conditions and extreme fire spread rates. Control of hostile fires under these conditions can be very difficult due to the high property values of the structures, etc. spread throughout the areas subject to wildfires. There are three Interstate highways in the Battalion, which can be significantly impacted by the smoke from hostile fires, which limits visibility to traffic.

**Objectives:**

1. Continue to educate the adult public on was to prevent hostile fires and preserve life safety.
2. Continue to educate the juvenile population on fire and life safety.
3. Obtain compliance throughout the Battalion of Public Resources Code Section 4291, "Clearance around structures, etc."
4. Reduce the size and threat of wildfires by fuel modification.
5. Increase and maintain the knowledge base and operational working relationship of cooperating fire agencies.
6. Reduce the threat of hostile fires escaping from known fire start hazard areas such as the wind power generation areas.
7. Reduce the total number of fire starts in the wind power generation areas.

**Priority Areas:**

1. Kilkare Canyon

2. Oakland / Berkley Hills

3. Altamont Pass Wind Generating area

**Action Plan:**

1. Distribute Fire Safe educational materials at public gatherings such as the county fair, Sunol Bed Race, and other public venues.

2. Conduct public information programs to the school children of the Kilkare Elementary School.

3. Conduct targeted inspections of dwellings and buildings for compliance with PRC 4291, in high hazard areas such as the Kilkare area.

4. Continue and enhance the fuel modification projects in the East Bay Hills, Lake Chabot, and other locations in cooperation with the East Bay Regional Parks District, California State Park System, and the Diablo Fire Safe Council.

5. Obtain language changes in the conditions of approval for wind power generators Use Permits requiring larger clearance distances around towers and equipment as well as clearly marking and numbering gates and road system utilizing the standards of PRC 4290 with regard to signage.

6. Fuel modification on the wind farm borders, i.e. Black line or disking to prevent a fire from escaping from original property of origin. Combine with live fire training exercises.

7. GIS / GPS mapping and marking of wind farm gates and road systems.

8. Compartmentalization in a true sense of the wind farms through fuel modification or road improvements. Combine efforts with live fire training exercises.

9. Conduct a bulk mailing of self inspection and fire safe guides to postal customers in the SRA.

10. Conduct meetings with agriculture groups such as Cattleman's Associations, Grower's Associations, and Future Farmers of America to provide information and encourage the use of firebreaks, and clearances around all improvements such as structures and wells. Including welding fire safety.

11. Conduct training exercises and pre-fire season briefings with cooperating fire agencies and share pre-fire plans for special target hazards.

***Battalion Five: (Stanislaus / San Antonio Valley)***

**Purpose Statement**

The Del Puerto battalion of the Santa Clara Unit includes all of Stanislaus, and portions of extreme southern San Joaquin and eastern Santa Clara Counties. The battalion is dominated by large landholders and ranches. Although with the expansion of the town of Patterson and the building of the Diablo Grande subdivision and golf course the days of sparsely populated cattle ranches is coming to an end. With this increase in population the battalion has seen an increase in the equipment caused fires. The 2003 fire season affected Battalion 5 more than any other battalion. Del Puerto fires, the Jump fire and the Annie fire all occurred in the battalion for approximately 32,000 acres burned

**Objectives:**

1. Help rebuild the infrastructure and increase the capacity of the San Antonio Volunteer Fire Department.
2. Continue fire prevention activities in the Del Puerto Canyon and surrounding area
3. Work with West Stanislaus Fire to enhance fire safety and fire safe building and landscaping practices in the Diablo Grande subdivision.
4. Actively pursue contracts with landowners in the San Antonio Valley and other areas of the Battalion for Vegetation Management Projects including control burns and mechanical treatments.
5. Maintenance and upkeep of County Line Road for access and as a fire control point.

**Priority Areas:**

1. San Antonio Valley
2. Del Puerto Canyon
3. Frank Rains Park
4. Diablo Grande subdivision

**Action Plan:**

1. Over the last two years the San Antonio Valley Volunteers have struggled to keep the doors open. With new state mandates in training, health and respiratory screening and monitoring, and the low population of the area, the group stopped responding to fire calls the 1st of January 2004. Tragedy also struck in May with the passing of George McGowan the Fire Chief. Given these circumstances, and the large area affected by the loss of fire response, searching for and securing funding to stabilize the situation in the San Antonio Valley will be a top priority in the planning cycle.
2. Foster the relationships with the homeowners groups and others that we began last year during the unprecedented fire season in the Del Puerto canyon area. A series of

community meetings and attendance of the various picnics and function occur throughout the year in the canyon and will be an excellent vehicle for this. An estimate of approximately 80 hours thru the planning period will be needed.

3. Review of the Frank Raines Park Expansion plan and continued development of Wildfire Mgt. Plan for the park. The review of draft documents including EIRS has already begun for this project. This is another avenue to meet and interact with the residents in the canyon. The expansion of the park is very contentious. Approximately 60 hours of staff time through the planning period will be needed.
4. Explore funding sources for mechanical treatment of the brush along County Line Road, and the major auxiliary roads off of it. Funding would also be used to continue the maintenance and yearly repair work done by the department.
5. Coordinate Cal Trans mowing of I-5 corridor:
6. News Release on Disking, mowing and 4291 clearances.
7. Develop SRA permit requirement notification on Valley Air QMD forms.
8. Assist in drafting new wind farm use permit Fire Requirements This will take approximately 40 hours.

***Battalion Six: (Contra Costa / Tracy)***

**Purpose Statement**

The Contra Costa battalion covers all of Contra Costa, a small sliver of north western Alameda, and western San Joaquin counties. There are several large land owners in the battalion. Two of the largest are Mt Diablo State Park, the wind power generating consortium near the Altamont pass and the Contra Costa Water District. The park encompasses approximately 20,000 acres of open space in the middle of the battalion. Contra Costa Water, in addition to being a stakeholder in watershed protection, also has the Los Vaqueros Reservoir, which covers 20,000 acres and provides a domestic water supply for over 450,000 people. The wind farms continue to be an ignition source for vegetation fires. While the fire safety steps that have been taken have improved the situation, there is more to be done. The Contra Costa counties population is over 1 million and the encroachment into the wildland urban interface is growing everyday. The cooperative agreements with other fire agencies in the battalion remain at the top of the list of projects. This includes the staffing Sunshine Station under an Amador plan with East Contra Costa Fire Department during the winter, and updating and improving the Mutual Threat Zone response plans. The Diablo Fire Safe council has been very successful in obtaining grant money to further fire safety and fuels management projects in Alameda and Contra Costa Counties and the battalion personnel will continue to support these projects in anyway possible. In October of 2003 the Diablo Fire Safe Council and Hills Emergency Forum hosted a Fire Wise Workshop at the San Ramon Convention Center. This workshop brought together city and county managers, planners, building officials, contractors and emergency services personnel to illustrate the wild land fire problem and mitigating steps that can be taken to decrease the amount of damage a fire can cause in our communities.

**Objectives**

1. Begin fuel modification, 4291 inspections; look at access and egress issues within and around the Canyon Community.
2. Implement a fuel modification zone on Diablo park boundaries
3. Continue working with the Diablo and US Fish and Wildlife to study the effects of fire passage on the Alameda Whip Snake.
4. Draft and implement a 20 to 25 year control burn cycle within the state park.
5. Maintain Wind Farm fire plans and continue the inspections of the re-powering projects.
6. Begin focused enforcement of 4291 in the Alhambra Valley and Wildcat canyon areas.
7. Begin the ground work for the same program in the San Pablo Watershed.
8. Continue working with Contra Costa Water to protect and enhance the Los Vaqueros watershed and nature area.
9. Upkeep, maintenance and mapping of the Contra Costa County fire trails.
10. Remain active in the Diablo Fire Safe Council.
11. Educate the public on equipment caused fires.
12. Reduce arson fires.

**Action Plan:**

1. Canyon
    a. Begin a series of community meetings to assess the overall feeling for fire safety in the community.
    b. Start a 5 year phase in on 4291 inspections as soon as the VIP's are able to.
    c. Address the access / egress issues with the county planning, transportation, and building officials.
    d. Using GIS based products and a fire behavior modeling program, Far Site or Behave, conduct a series of fire scenarios in the Canyon area before fuel modification projects and after. Once these scenarios have been completed take the resources used to control the fire and do a cost of suppression estimate on the fires without engineering projects and those with completed projects to illustrate the difference in costs associated with a large fire occurrence.
    e. Start a phased in enforcement of the 4290 Driveway and Water supply requirements in the community.
    f. Explore the possibility of placing the utilities that are present in Canyon underground with the responsible agency.

2. Mt. Diablo State Park
    a. Implement a fuel modification zone along the park boundaries to limit fires from extending from the park into the houses on the border and vice a versa.
    b. Work with park management, US Fish and Wildlife Services, and local governments near the park to draft and implement a 20 year fire reintroduction plan in the park.
        1. This project would start at or near the top of the mountain and proceed down and begin again after reaching the bottom areas.
        2. These burns would be confined to approximately 500 acres per year as conditions allowed.

3. Alhambra Valley, Wild Cat Canyon, West Contra Costa County
        a. Begin a focused phased 4291 enforcement program in the area as soon as the VIP's become available from other projects.
        b. Assess the area for fuel modification projects and secure contracts with land owners in the area.

4. Bollinger Canyon, Las Trampas Ridge
    a. Working with East Bay Regional Parks, San Ramon Valley Fire Department, and local home and land owners begin a fuel modification on Las Trampas Ridge running north.
    b. Continue 4291 and local weed abatement enforcement in the LRA and SRA area.

5. Los Vaqueros Water Shed and Mallory Ridge

a. Continue assisting Con Water with fuel modification projects and control burns in the Los Vaqueros watershed sensitive areas.
b. Assist Con Water with their weed abatement projects on Mallory Ridge.

***Battalion Seven: (South Santa Clara County Fire District)***

**Purpose Statement**

Battalion seven is a contract agreement with the South Santa Clara County Fire District. The Fire District covers 264 square miles and protects the unincorporated areas of Morgan Hill, Gilroy, and San Martin. The Fire Dist has a large wildland urban interface population and includes protection responsibility in and bordering to State responsibility Area. In certain areas of the Fire District there is potential for large and devastating Interface fire.

**Objectives:**

1. To minimize the interface fire threat.
2. To identify Mutual Threat Zones (MTZ's) and enter into response agreements
3. To identify high fire severity zones and complete pre-response and evacuation plans.
4. To identify fuel reduction and fuel modification projects in the high fire severity zones.
5. To keep structure fires to the room of origin.
6. To treat, package, and transport patients to definitive care within 1 hour.
7. To establish a Community Emergency Response Team (CERT) in San Martin.

**Action Plan:**

1. Maintain pre fire plans.
2. Educate the public about the Santa Clara County Fire safe Council.
3. Maintain school and special event programs.
4. Assist Unit VIPs with LE 38 program for PRC 4291.
5. Continue to recruit and retain Paid Call Firefighters.
6. Continue plans reviews and enforcement of PRC 4290
7. To provide employees with the latest Fire and EMS training in support of items 5 and 6.

***Battalion 9: (Emergency Command Center)***

**Purpose Statement:**

The Santa Clara Unit Emergency Command Center (SCU ECC) provides command and control services for much of the unincorporated areas of Santa Clara, Alameda, Contra Costa, Western Stanislaus and San Joaquin Counties.

In 1995, the SCU ECC processed 3468 incidents. With the ending of 2003, 5913 incidents were processed, and increase of over 41% 8 years. The Santa Clara Unit has the potential to lose million's of dollars during ANY wildfire that starts within the Unit. The SCU ECC is currently staffed with 4 Fire Captain's, 3 Dispatchers and 1 Battalion Chief. This Staffing has remained constant since 2000 this allows for a combination of 3 dispatch personnel during the day and 1 ECC Duty Captain sleeping near by to dispatch at night.

Given the large population of the unit and the potential for a large catastrophic natural or man made disaster to occur within the unit an effort must be made to retain qualified ECC staff and to continue the training of the Volunteers In Prevention to augment the daily ECC staffing. Unit staff in cooperation with the other dispatch centers in the unit have acquired and installed a UHF radio frequency for use within the Southern Bay Area during increased call activity or a major response to a disaster. This frequency, BAYMACS, went on line in June of 2004 and is a large step forward in common communications in the bay area, hopefully averting some of the issues the became painfully apparent in Southern California in October of 2003.

***Objectives***

- Continue to provide quality command and control services to all of our customers
- Pursue staffing increases to support increases of daily incidents.
- Pursue available technology to more efficiently conduct command and control operations.

**Mission**

The mission of the Morgan Hill Command Center is to provide a consistent, accurate, timely and coordinated command and control system. "We will provide support, direction, and communications with our ultimate goal being the best service possible to all who depend on our services."

***Battalion 05: (Training And Safety Bureau)***

Firefighting is a very dangerous and demanding job that requires split second life decisions. Firefighters must be able to quickly assess a situation, develop an incident action plan and execute the plan regardless of the type of emergency.

The world has changed so much since the first horse drawn fire pumper responded as a public service for the people of its towns and cities.

With all its Honor and Tradition, the fire service of today has recognized its role in an all risk emergency response. This new type of emergency response identifies the need to develop interagency training with local fire departments. Wildland Interface, Weapons of Mass Destruction and Homeland Security, are a few of the new training programs presented to the fire service as a whole.

The goal of the Santa Clara Training Program is to assure quality service to the public by developing the skills and abilities of all its Fire Protection employees and to intergrate an all risk response concept with local agencies within our unit.

To accomplish this goal, we will follow these training objectives:

- Assess the training needs of each class of employee, (firefighter to chief)
- Continue to provide training, safety service and support to all volunteer companies
- Maintain the training standards outlined in the 4300 training manuals
- Develop training instructors or identify outside sources of training to meet our objectives, ie. Community Colleges
- Continue the All Risk Emergency Response Training Program with our Local Agencies through the CICCS Program
- Research and develop outside funding resources such as grants
- Maintain the California Firefighter Joint Apprentice Program
- IIPP and ensuring a Safe Work Environment with our Unit

The Training Chief is the unit Safety Officer. He or She ensures that the department follows national and state, health/safety requirements for firefighting, emergency medical, hazardous materials response and technical rescue standards.
Safety Officers must be informed and ready to provide comprehensive and accurate training and safety information to firefighters. This helps firefighters safely perform their duty. The Safety Officer ensures that the Unit Health and Safety Committee meets quarterly. The Training and Safety Officers respond to all risk emergencies as incident safety officers or assistant incident safety officers. They also respond to emergencies as additional command officers and have technical expertise in fields such as Trench/ Rescue Systems.

***Battalion 20: (Fire Prevention Bureau)***

**Purpose Statement:**

The Santa Clara Fire Prevention Bureau falls under the direction and supervision of the East Bay Division Chief. The Bureau is staffed by a Battalion Chief, one Fire Captain Specialist, one Pre-Fire Engineer who also doubles as a fire Captain Specialist, and a Fire Prevention Specialist II. The Bureau is involved in all areas of prevention and is broken down into three separate, but related functions handled by the individuals assigned to the Bureau, education, engineering and enforcement.

The Volunteers in Prevention program is administered and coordinated by the FPS II. The VIP's currently have 92 members and in 2003 conducted 352 public outreach and education program making 406,590 personal contacts, 45 news releases, 1965 PRC- 4291-6 inspections, and when combined with other projects donated a total of 8900 hours of personnel time to fire prevention engineering and education to the unit.

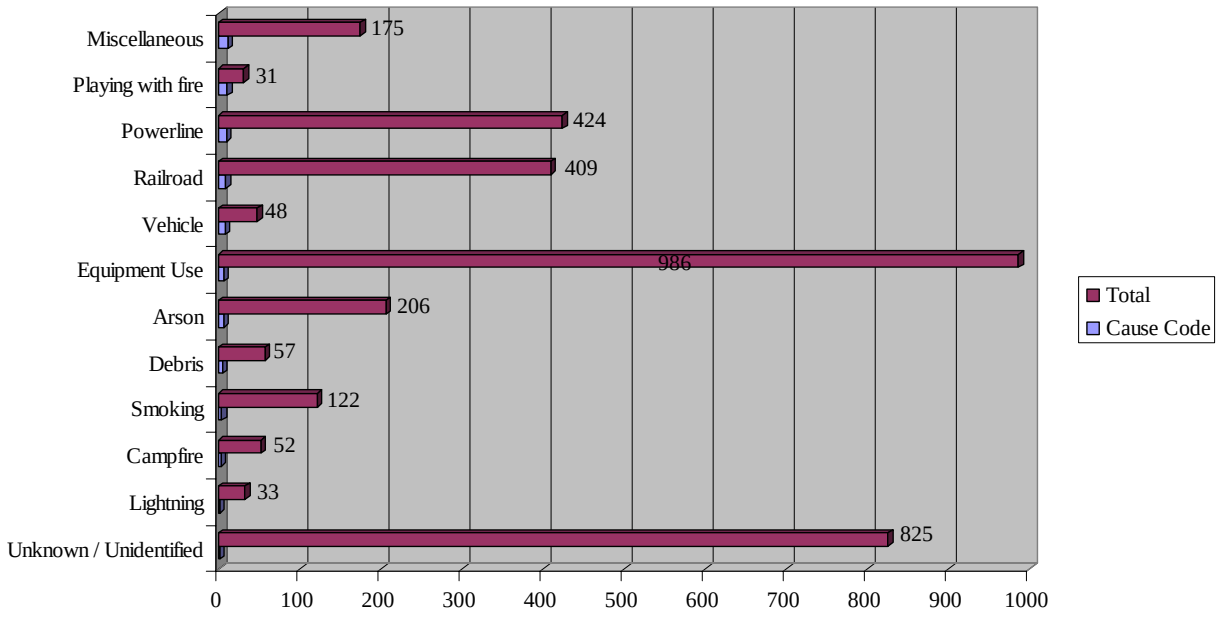
Law Enforcement branch of the Bureau includes; fire investigation, issuing citations, processing criminal complaints with local District Attorneys, and civil cost collections, which are returned to the States General Fund. The Bureau maintains membership in the Santa Clara and Alameda County Fire Prevention Officers, and Fire Investigation groups, and is currently working to establish an interdisciplinary fire investigation team in Contra Costa County. In addition to these groups the Bureau is actively fostering working relationships with the over 40 other Law Enforcement agencies within the units boundaries.

Pre Fire Engineering and Fire Protection Planning are also handled by the Bureau. The bulk of the Public Resources Code 4290 inspections are conducted by the counties in cooperation with the local CDF Battalion Chief. Pre Fire Engineering includes GIS mapping of assets at risk, wildland fuel belts, and the maintenance of various other GIS data layers for use in planning and implementing fuel reduction projects. The Bureau also provides technical support to for two Fire Safe Council's active in the unit, Santa Clara Fire Safe, Diablo Fire Safe, and to the Hills Emergency Forum, a working group formed after the Tunnel Fire to address projects in the LRA and interface areas of the East Bay Hills and surrounding communities. With input and cooperation from these groups, and the associated stake holders, the Pre-Fire Engineer establishes goals and projects in the unit Fire Management plan to reduce the threat of large damaging fires. The document is the units' template for fuels reduction projects to pending, completed, and for general public review, and comment. The units Fire Plan allows us to respond to the needs and concerns of the public and identifies projects to be funded through cooperative grants and donations.

Through these three functions the goal of the Santa Clara Fire Prevention Bureau is working to reduce unplanned ignitions within the unit, limit damage caused by uncontrolled fires, through the use of education, pre fire mitigation projects, patrol, and law enforcement to meet the mission statement of the Department of Forestry and Fire Protection.

From January 1990 and April 2004 the Santa Clara Unit responded to 3368 fires. This graph shows the fires by cause.

**Ignitions By Type 1990 to 2004**



## Vegetation Management Program:

Vegetation Management Program in Fire Management

Attainment of the fuels reduction goals of the Santa Clara Unit Fire Plan will require on-the-ground effort on the Department's partial use of CDF, CDC, CYA and CCC crews and equipment will likely be necessary in many areas where stakeholders do not have the finances or resources to do an effective job individually or as a group. The Vegetation Management program (VMP) is currently in a state of hibernation due to the state budget and financial constraints. While this is a temporary hold on the Program the unit currently has a variety of VMP projects in various stages of preparation, ranging from those with range, water shed and wildlife habitat improvement as the primary goals, i.e.: the Isabel Valley, Mt Mocho, and other eastern Santa Clara County burns. The PL 566 project and Mt. Diablo State Park burns will have a community fire protection goal in addition to wildlife habitat renewal. Santa Clara Unit will make a concerted effort to pursue projects that meet the wide array of demands placed on the Vegetation Management Program in Santa Clara Unit.

## Objectives:

The vegetation management program will shift emphasis to:

- Smaller projects closer to new developments
- Alternatives to fire, such as mechanical fuel treatment
- Emphasis on quality over quantity
- In some instances the program may be limited to simply providing wildland safety and protection zones around high value assets.

With the possibility of additional grant funding during the year, additional projects may evolve. VMP projects must be closely tied to the Santa Clara Unit Fire Management Plan. Since CDF's most damaging fires are in urban interface, VMP projects must focus on critical, at-risk community developments or where projects reduce a fires potential to extend into those communities.

## Action Plan:

Funding and labor resources are always a challenge to obtain projected project completion dates.

Labor force availability is a limiting factor to achieving project completion. In the Santa Clara Unit the Ben Lomand Youth Conservation and Delta Adult Conservation camps are the main labor forces available to perform project tasks. Ben Lomand is made up of California Youth Authority wards. The camp is located just west of the Santa Cruz county line. Delta Camp is in Solano County

on highway 113. Both camps provide a variety of emergency services including wildland fire suppression and rescue capabilities. While the crews are not involved with emergency activities, they are contracted to work on “reimbursable projects” to supplement their existence at the camp. Their cost and availability is an issue to use them on the projects in Santa Clara County. California Department of Corrections camps outside of the Santa Clara Unit have long travel times to consider using them as possible labor.

An additional camp located in or adjacent to the northern sections of the Santa Clara Unit whose population would be made up of CDC or CYA wards is a possible solution to this labor force deficiency that would also provide better strategic coverage for response to wildland fires. These crews would help implement the proposed projects listed in the Santa Clara Unit Fire Management Plan, thereby reducing Santa Clara Unit’s wildland fire problem. The added crews would be valuable in preventing and combating periodic floods and disasters. They could also provide economic stimulus to more remote areas of Santa Clara Unit, and could assist agencies of local, state and federal government in completion of conservation-related work projects.

# Appendices

## Appendix A - East Bay Regional Parks:

### Purpose Statement:

The East Bay Regional Park District provides fire services to 95,000 acres of park property in Alameda and Contra Costa Counties. Of these acres approximately 30,000 acres in Alameda County and 35,000 acres in Contra Costa County are in the State Responsibility Area (CDF DPA). Three of the parks under management of the district are State Recreation Areas, owned by the State of California, under a contractual agreement. The park district maintains its own police department and dispatch services are provided from the Lake Chabot Public Safety Headquarters in Castro Valley. The Fire Department is a full service fire agency operating out 10 fire stations are; nine type 4 engines, four type 3 engines, and one water tender. In addition the districts two helicopters have water dropping capabilities, are on line as ALS providers on most days, and on high fire danger days are staffed with 3 to 4 fire fighters to form a short helitack crew. EBRPD is a full member of the Hills Emergency Forum and Diablo Fire Safe Council as well as membership on the state wide Fire Safe Council. The District is a full member of the Chiefs association in Alameda and Contra Costa Counties.

### Fire Management Objectives:

1. Maintain five remote fire weather stations (RAWS). These will be located at Black Diamond, Briones, Las Trampas, Sunol Regional, and Calaveras Road. In addition the District will monitor five other RAWS in Livermore, Oakland South, Oakland North, Mallory Ridge and Mt. Diablo to determine fire restrictions and potential closures in the park system and dispatch levels during fire season.
2. Continue to review and provide input on new construction projects within the Parks
3. Participate in both the Hills Emergency Forum and Diablo Fire Safe Councils
4. Maintain current fuel breaks in the East Bay Hills. This covers approximately 625 acres and stretches 23 miles within and around the cities of Oakland, Berkeley, Richmond, El Cerrito, Kensington, and Castro Valley.
5. Continue to conduct prescribed fire control burns on approximately 1200 acres of park property to control non native plants and reduce hazardous fuel accumulations.
6. Continue the current Goat grazing program on approximately 2000 acres each year.
7. Continue utilizing cattle to graze an additional 60,000 acres of property each year.
8. Current fuel break projects in cooperation with the California Dept. of Forestry and California Department of Corrections are;
    a. Anthony Chabot Regional Park Fuel Break
    b. Tilden Park Fuel Break (Frowning Ridge)
        1. This fuel break is a cooperative effort between UC Berkeley, Lawrence Berkeley Laboratory and the Claremont Canyon Conservancy. By joining together the fuel break is becoming a continuous project on the ridge top between Wildcat Canyon on the East and Strawberry and Claremont Canyons to the west. This area is within one mile of the 1991 “Tunnel” fire with much the same pre fire conditions that were present in the fire area.
    c. Claremont Canyon – Stonewall under story Fuel Break

1. This project is funded in part by grant monies from the US Fish and Wildlife Service

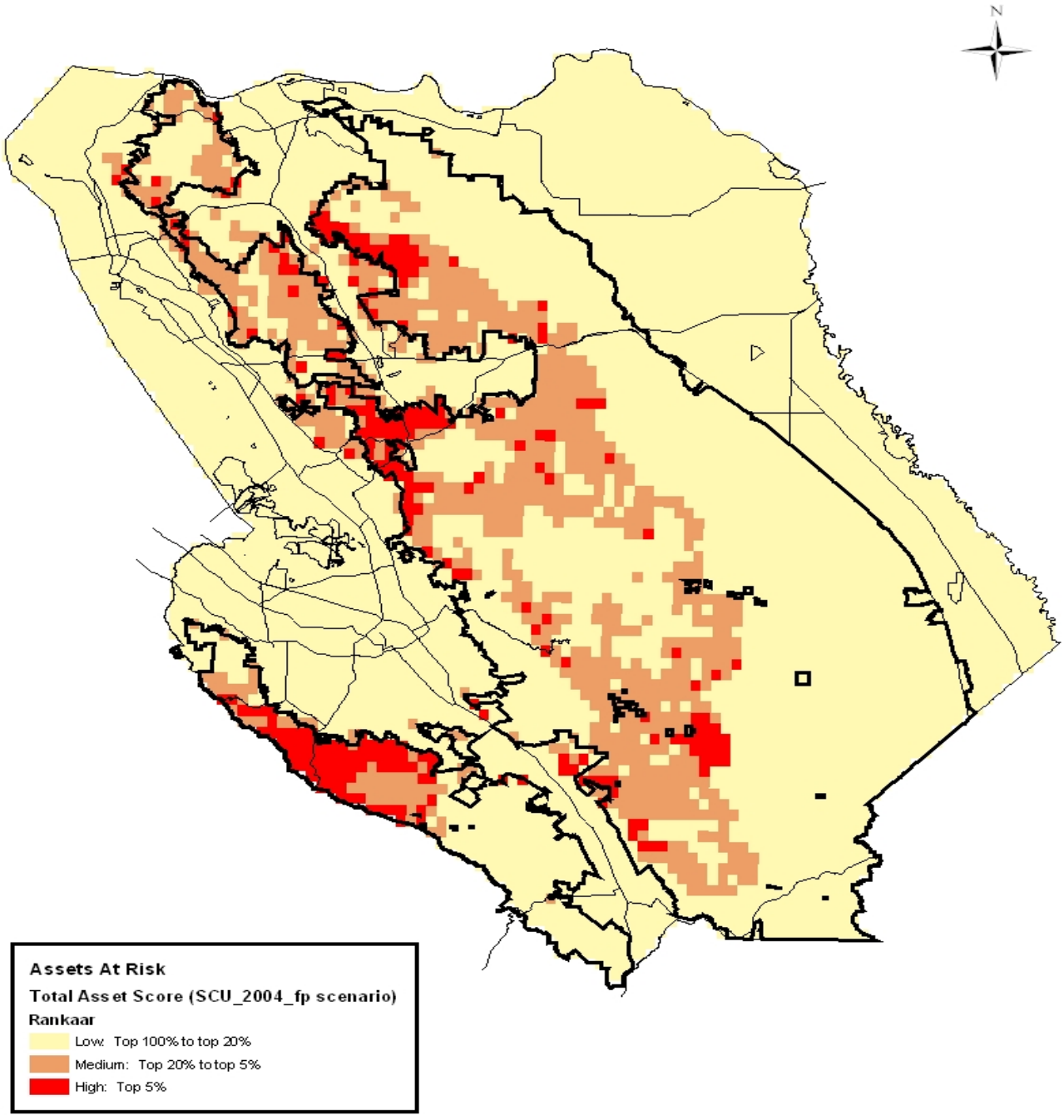
d. Claremont Canyon – Panoramic Way Fuel Break
e. Wildcat Canyon – Camp Herms Fuel Break
f. Cities of El Cerrito and Kensington Fuel Breaks

9. Utilize the East Bay Conservation Corps to remove brush and mow grass to create Defensible space around structures in the cities of Oakland, Berkeley, El Cerrito and Kensington. This is also a cooperative project to enhance fire safety in the east bay hills. The project was conceptualized during the Hills Emergency Forum meeting and put into reality by the members of that group.
10. FEMA Grant Project – Three year renewing grant for approximately 1million dollars. This project encompasses 37 projects within 7 regional parks in the East Bay Hills. Refer to the grant document for specifics.
11. US Fish and Wildlife Service – This is a $100,000 grant to support the protection of special status species within the East Bay Hills Fuel Break.
12. Mechanical Treatment Projects – Mulching machines (Brontosaurus) and other safe and environmentally friendly vegetation clearing systems are being used and evaluated for expanded uses in the District. The Brontosaurus can cut trees as large as 12 inches in diameter and as tall as 40 feet leaving a ground covering mulch with chips less than 4 inches in size. One of the goals of the study is to determine the effects of the mulch as both a erosion inhibitor and as a barrier for noxious weed regeneration. So far the project covers approximately 400 acres in Anthony Chabot Park and 75 acres in Tilden Regional Park, as part of the cooperative Frowning Ridge Fuel Break.
13. Continue Herbicide treatments of the areas were Eucalyptus removal has taken place. This involves the herbicide being applied directly to the sumps of the removed trees with paint brushes or similar methods to reduce the amount of herbicide that is introduced into the environment. The annually treated acres are approximately 500.
14. The Parks District has a significant fire road and trail system to reduce fire spread potential from both within and from outside park boundaries. These roads are maintained to permit one way traffic by park employees throughout the year.

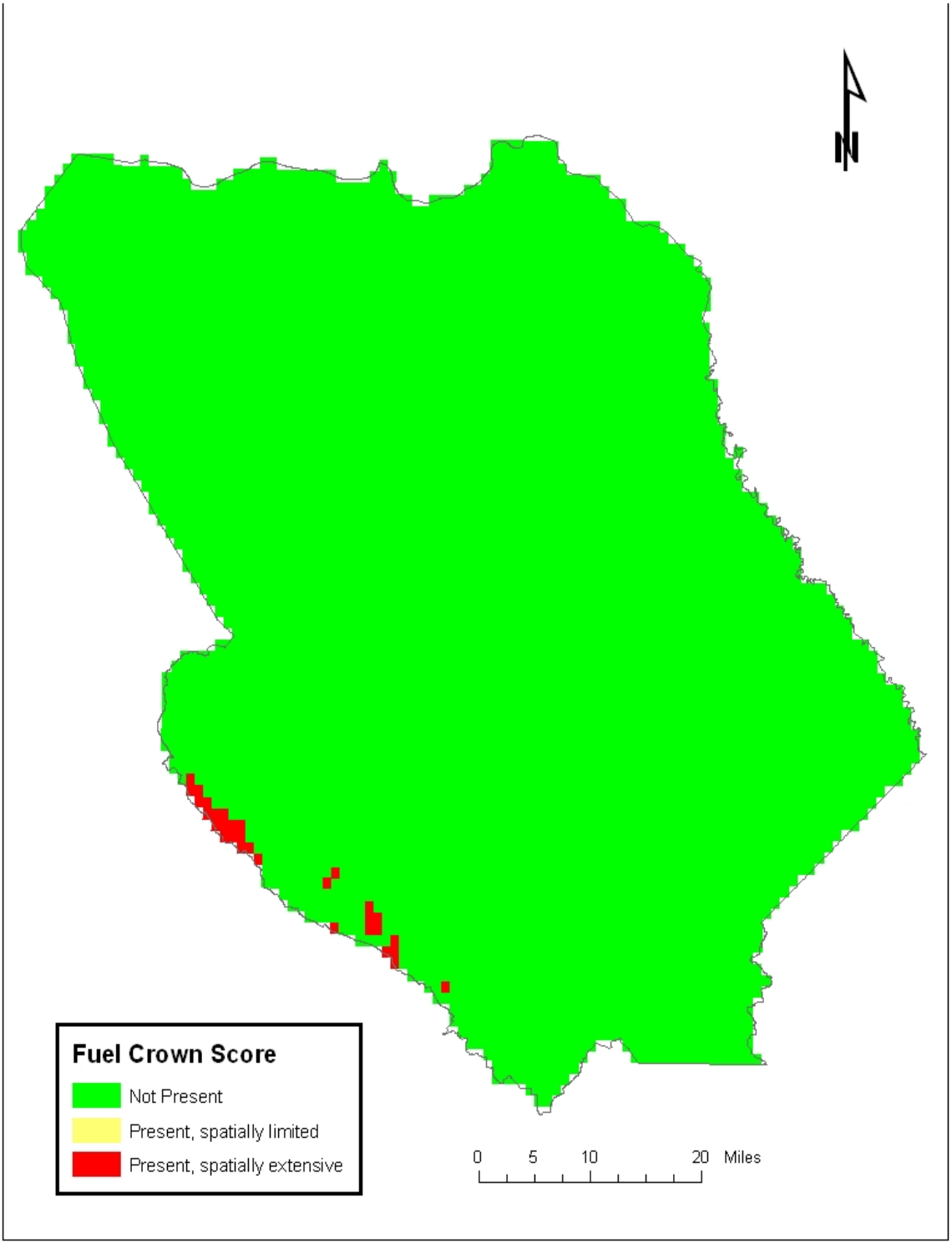
## Appendix B – Fire Plan GIS map products

Assets at Risk
Crown Score
Failure Density
Fire History
Fuel Ranking
Initial Attack Analysis
Fire Ignitions
Ladder Fuel Score
Level of Service
Level of Service by Fuel Planning Belt
Fuel Planning Belts
Severe Fire Weather by NFDRS Zone
Severe Fire Weather by Score
Slope Class
Surface Fuel Ranking
Weather, Assets at Risk, Fuel, and Level of Service Calculator results

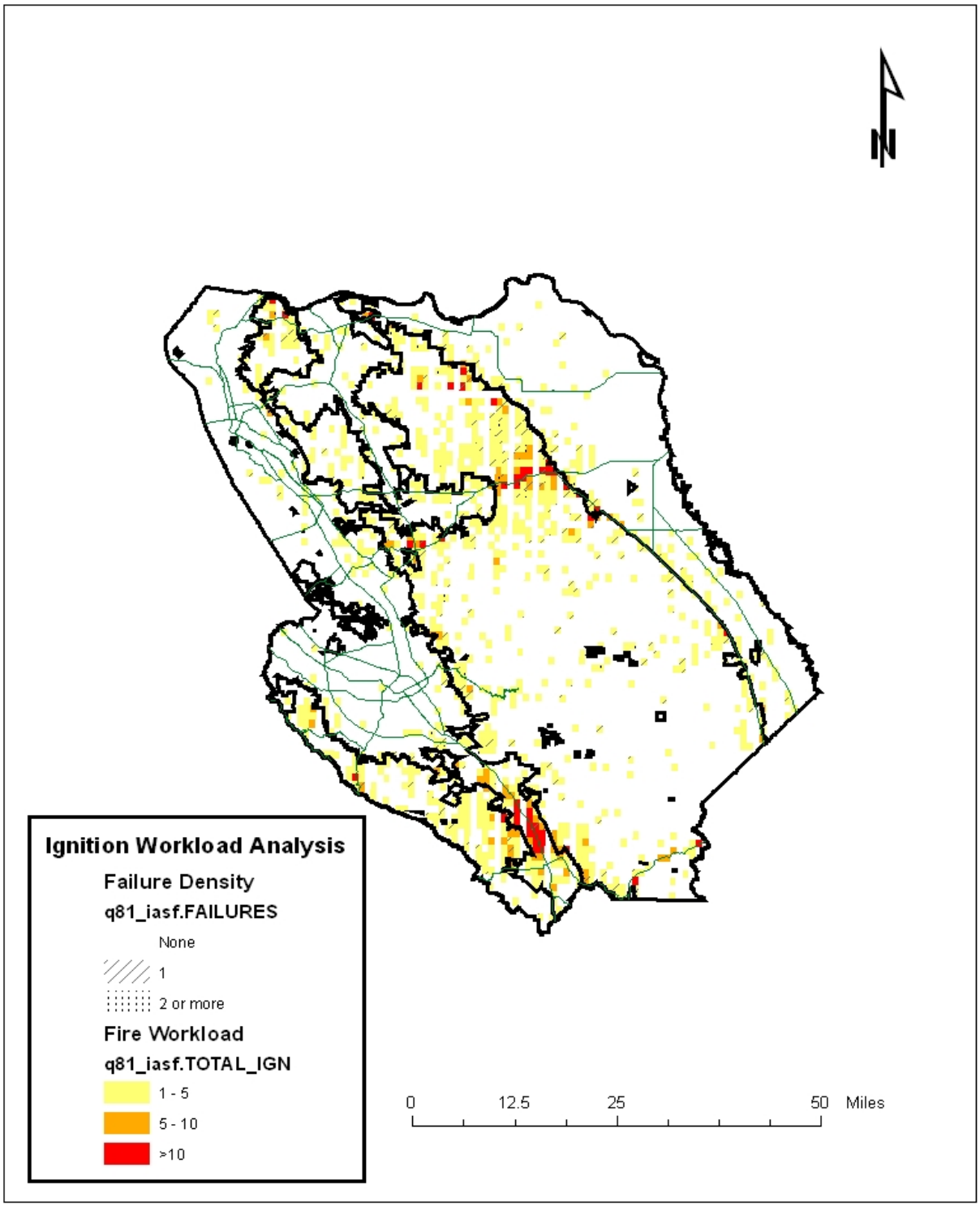
## Assets at Risk



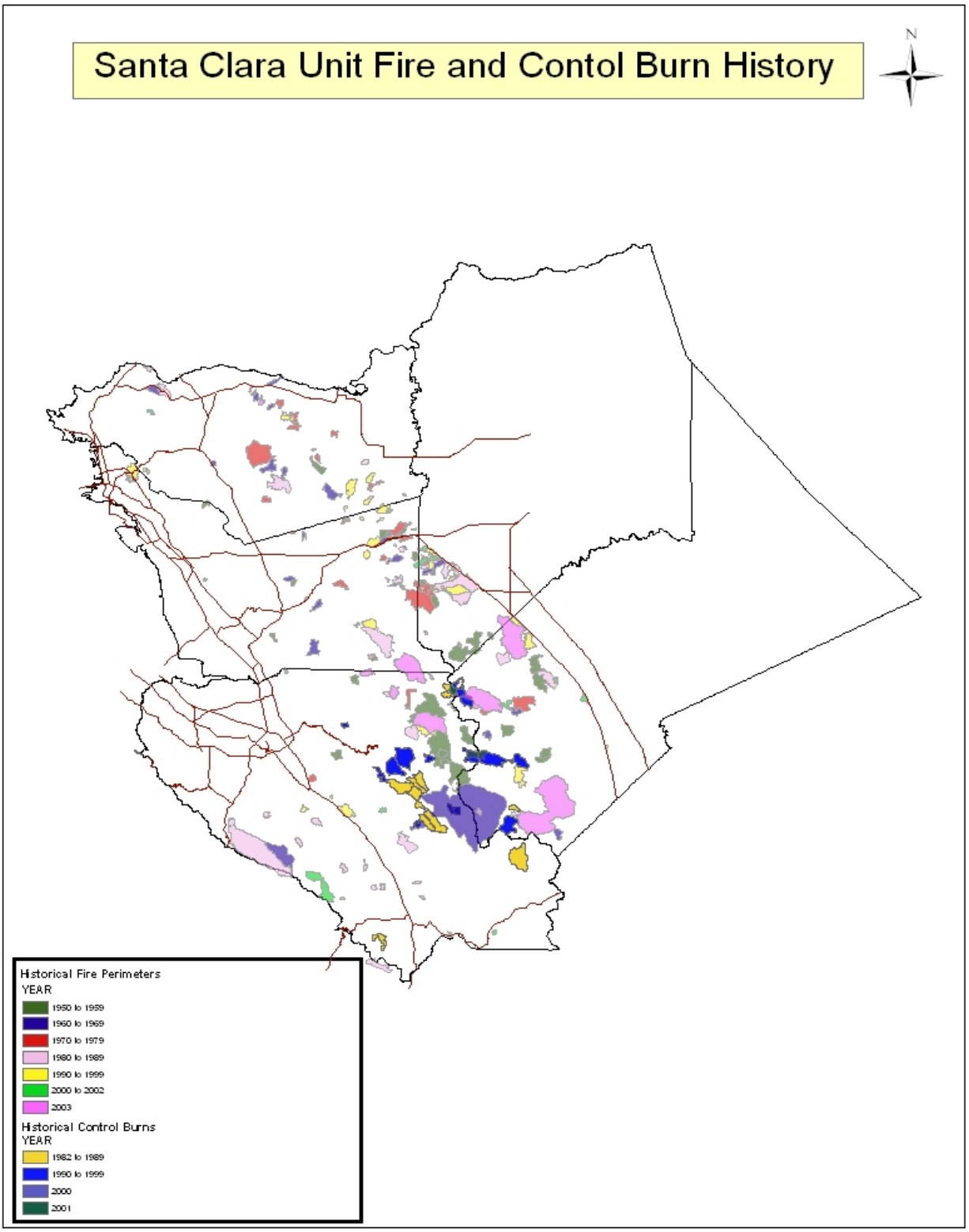
## Crown Score


N
Fuel Crown Score
Not Present
Present, spatially limited
Present, spatially extensive
0
5
10
20
Miles

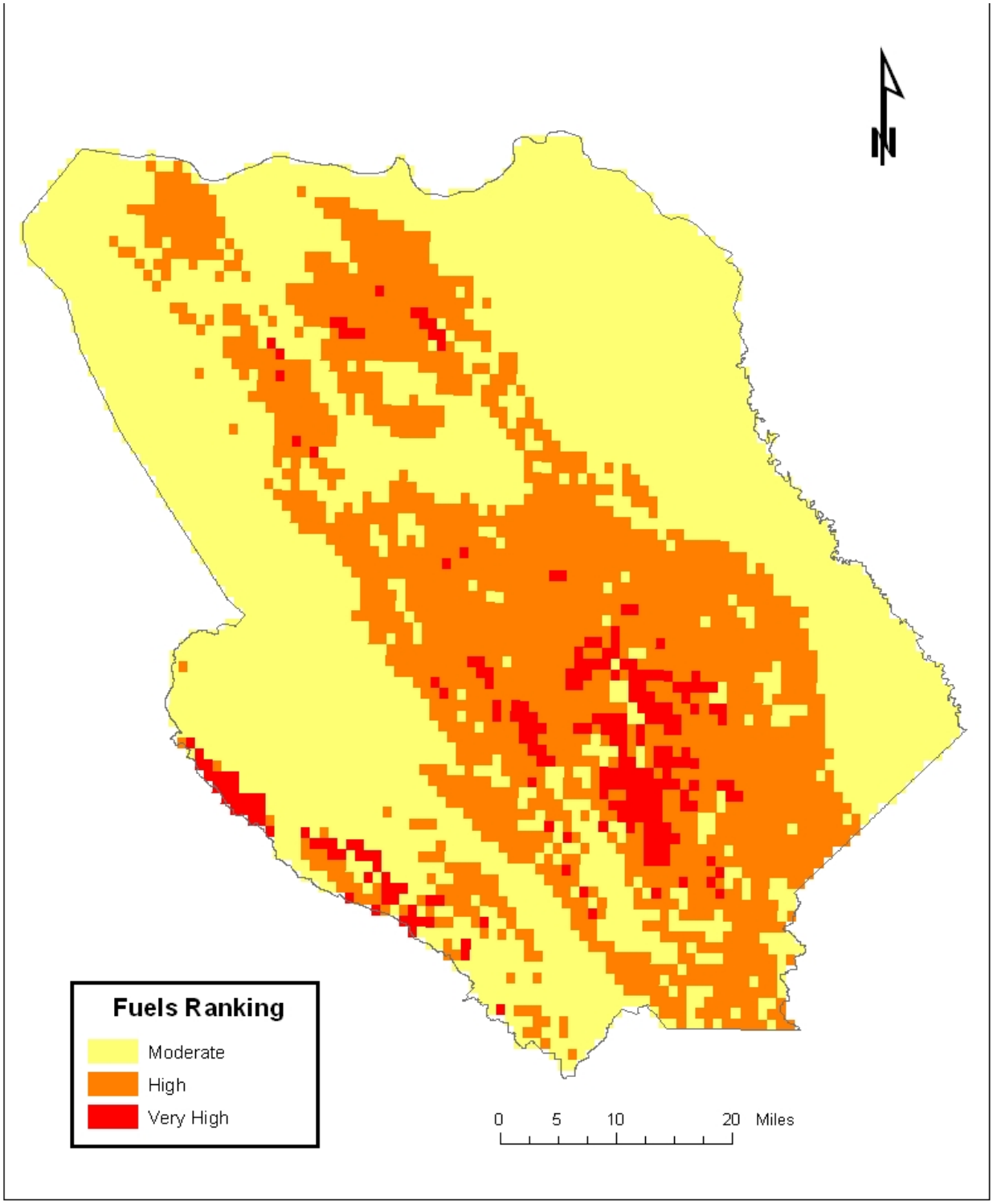
## Initial Attack Failure Density



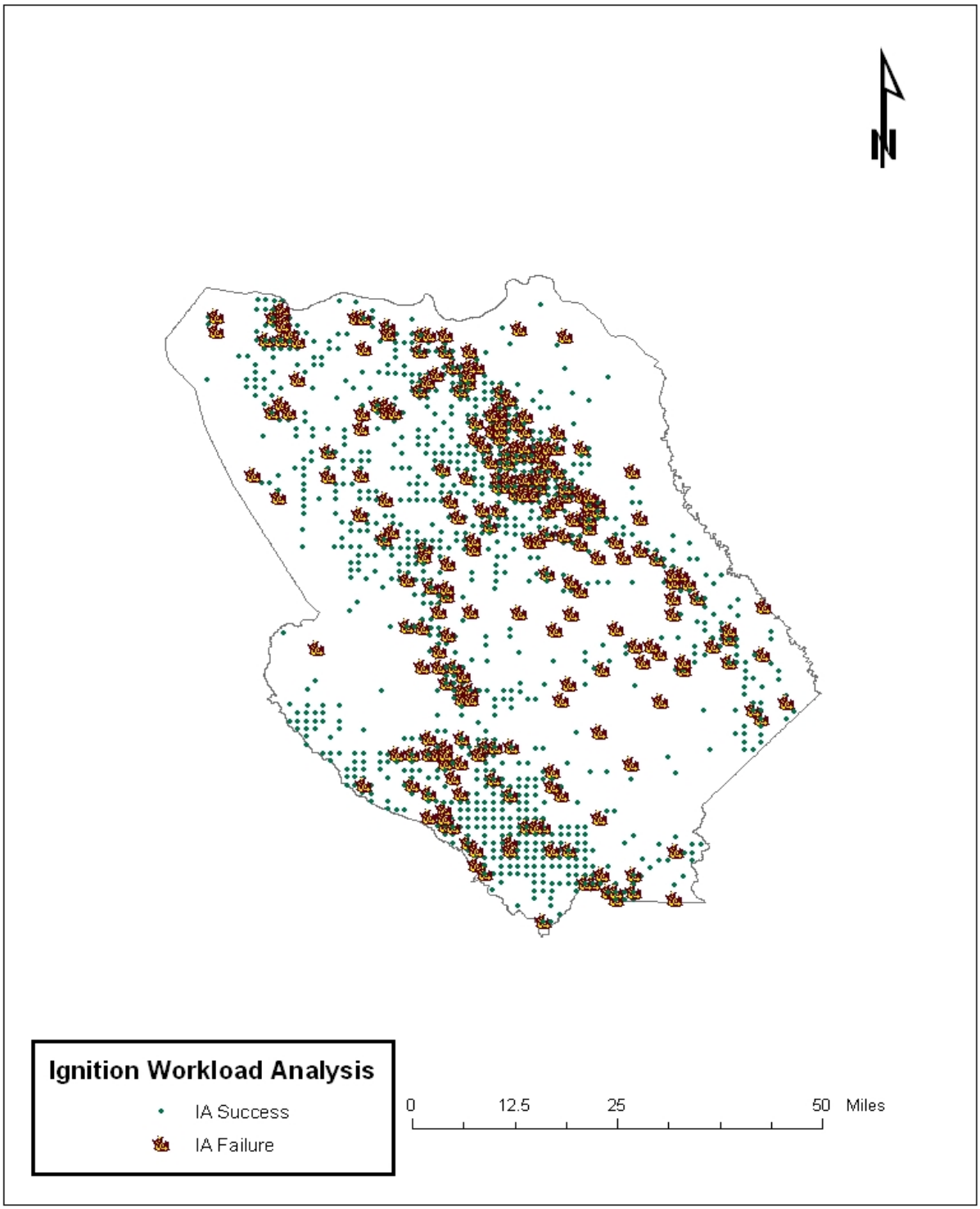
**Fire and Control Burn Perimeter History**



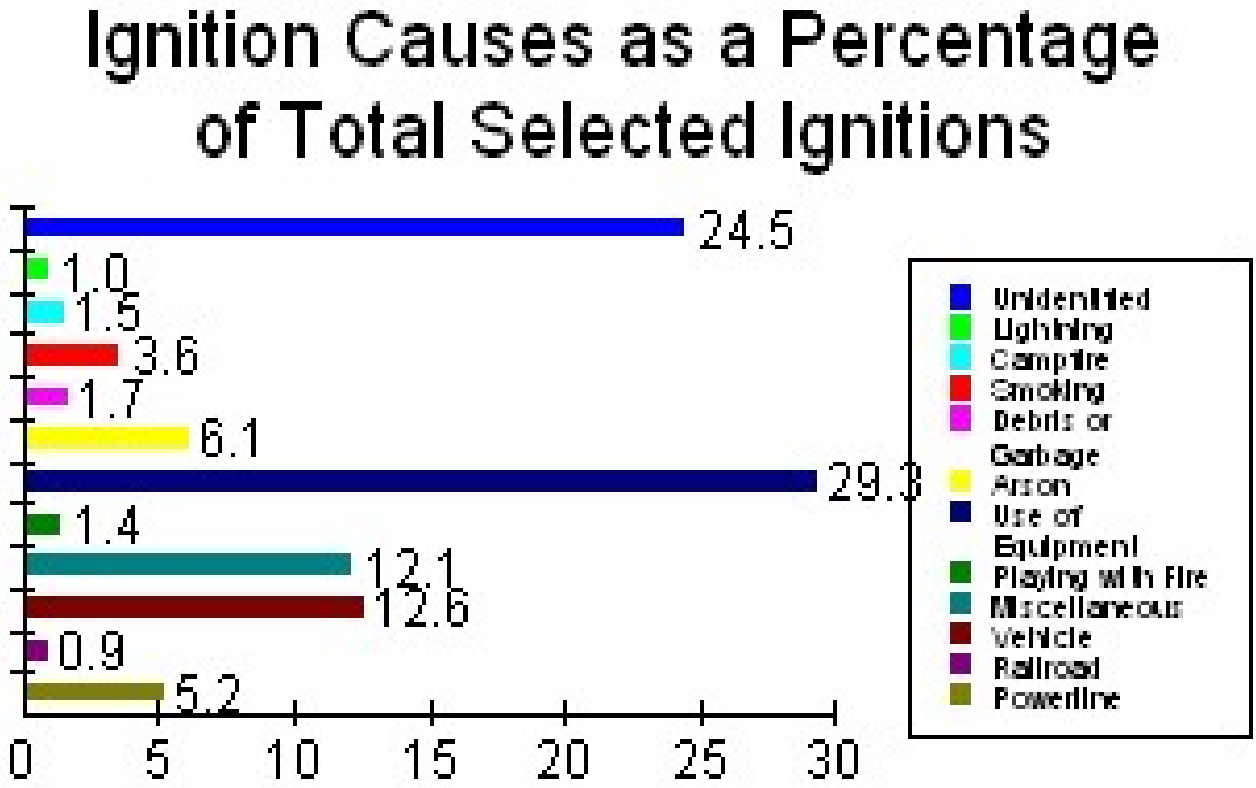
## Fuel Ranking



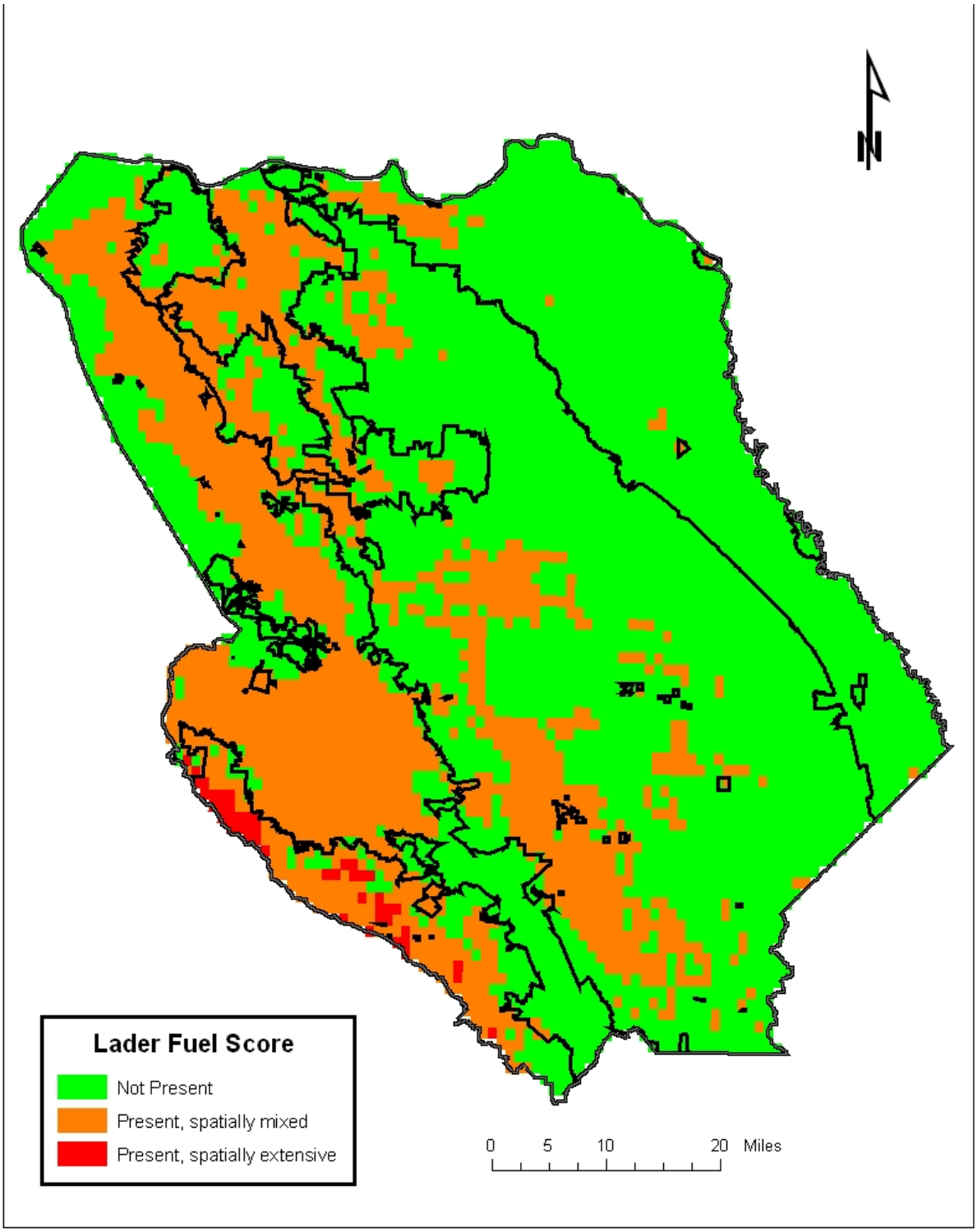
## Initial Attack Analysis



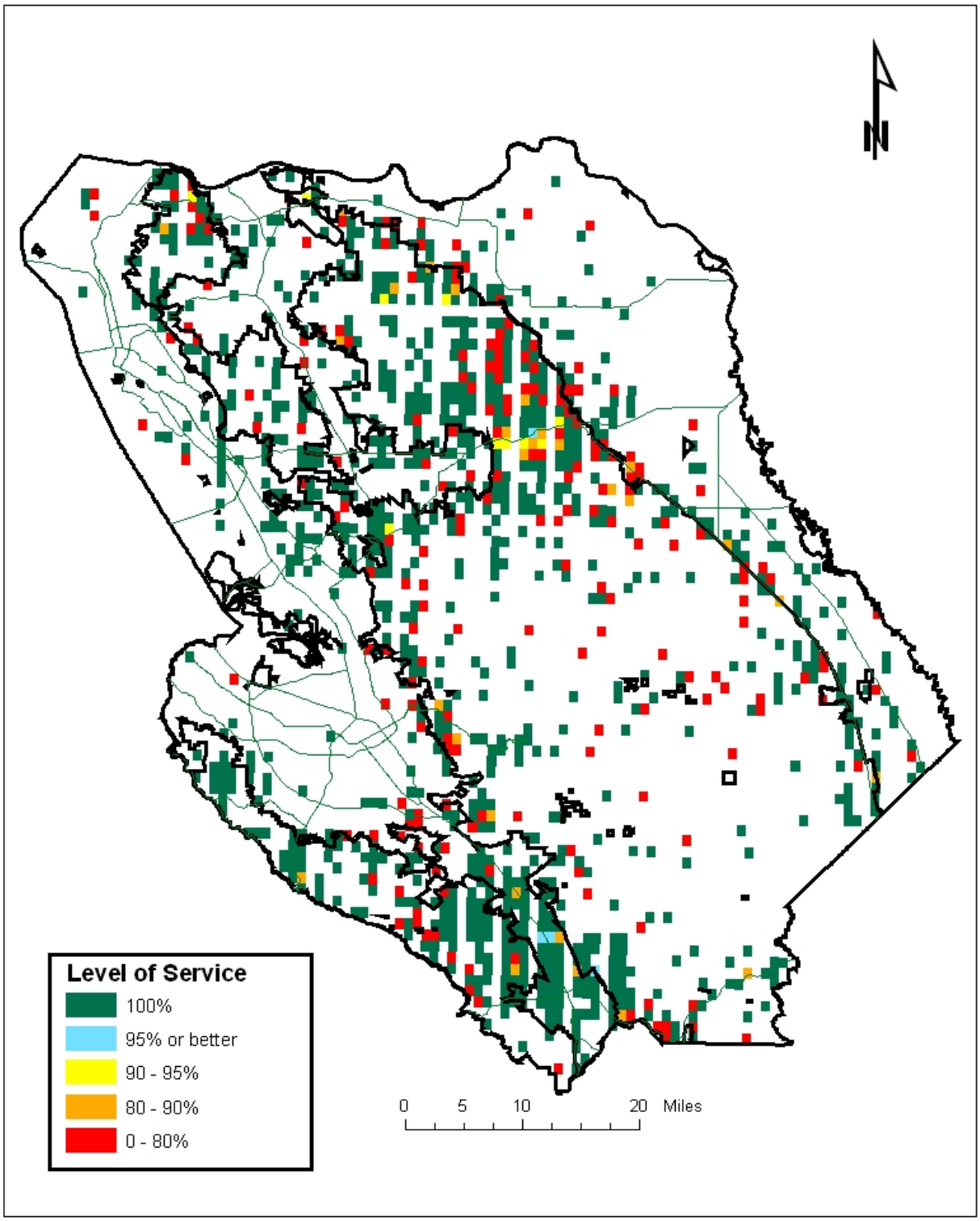
**Fire Ignitions**



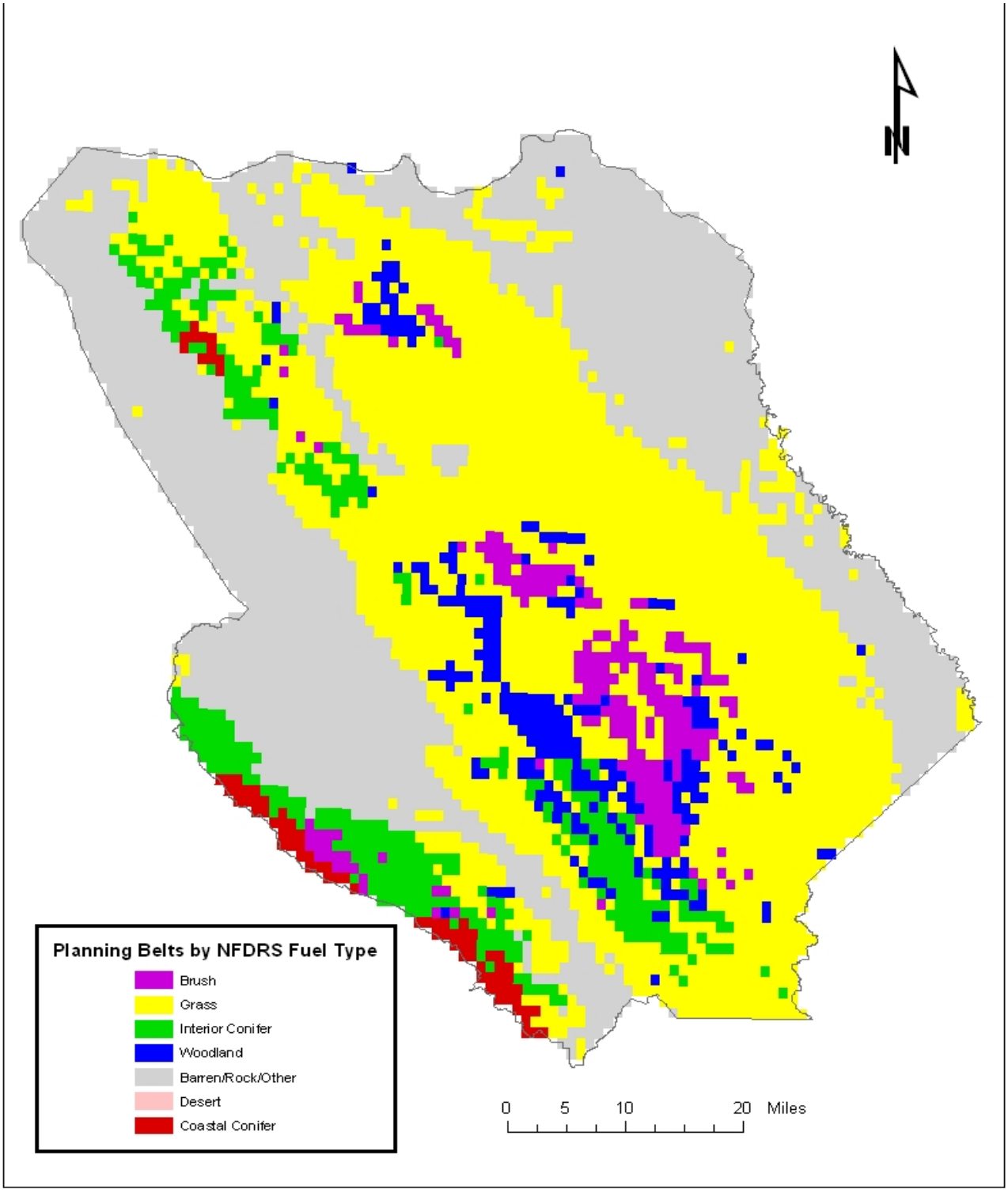
## Ladder Fuel Score



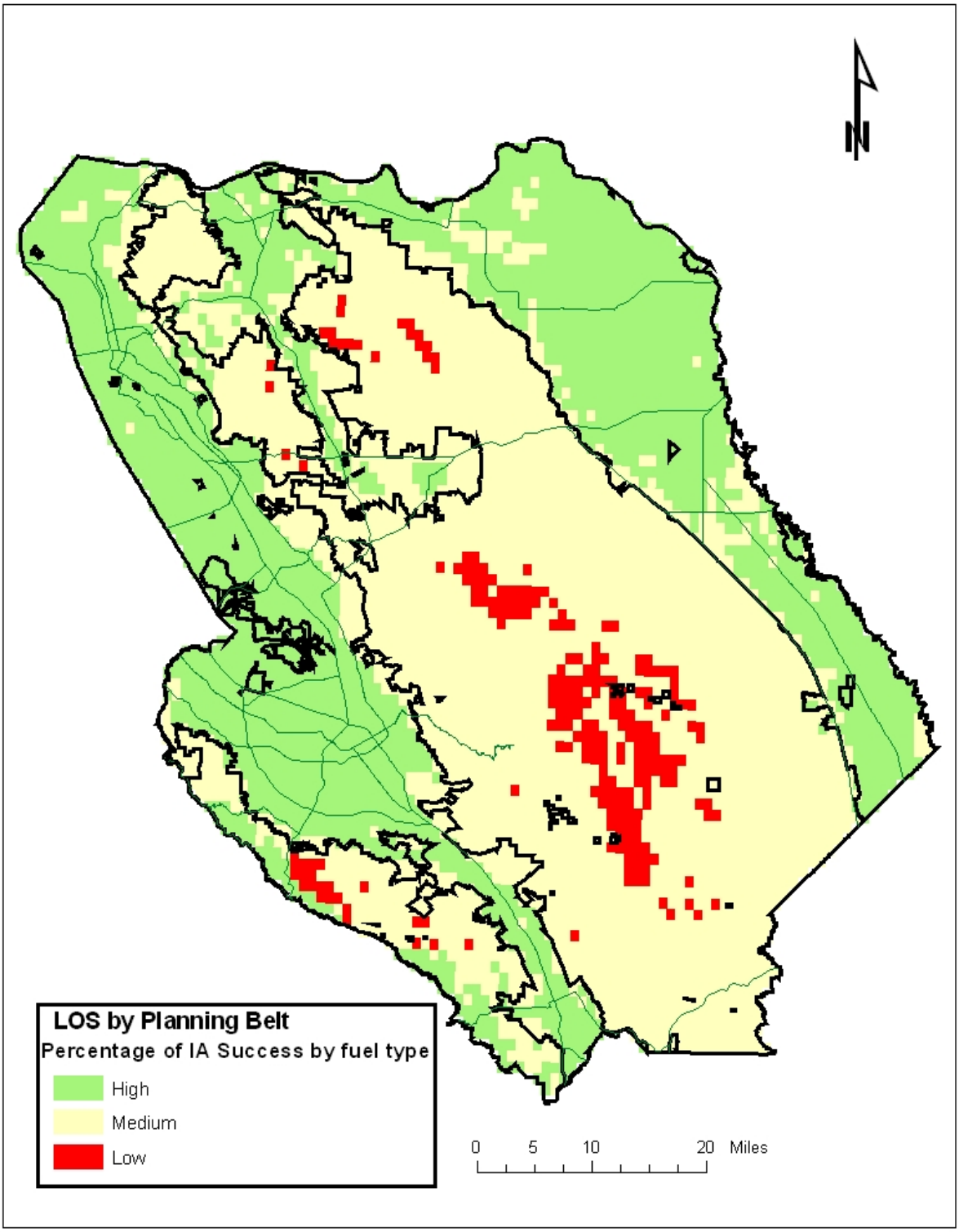
## Level of Service



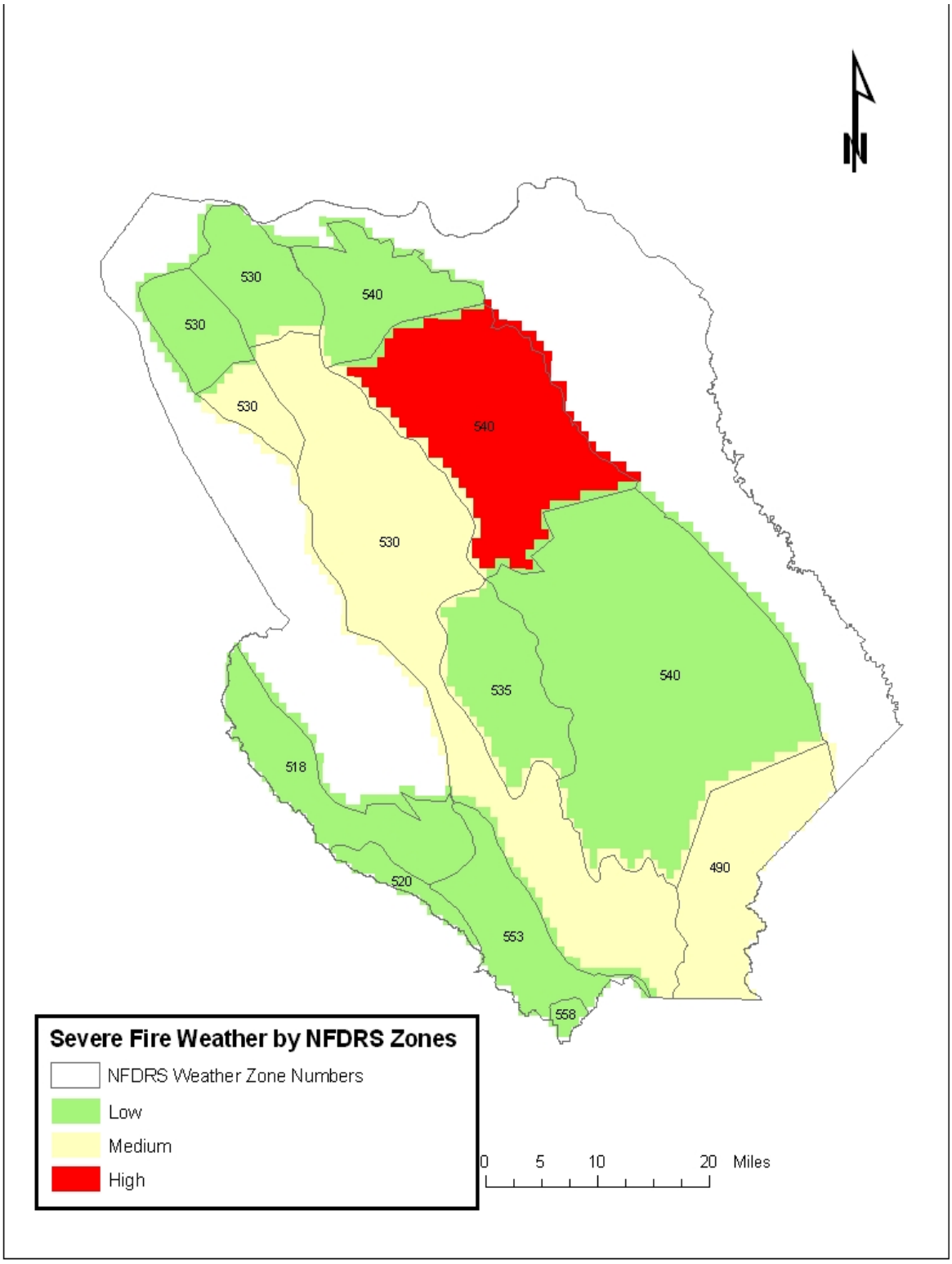
## Fuel Planning Belts



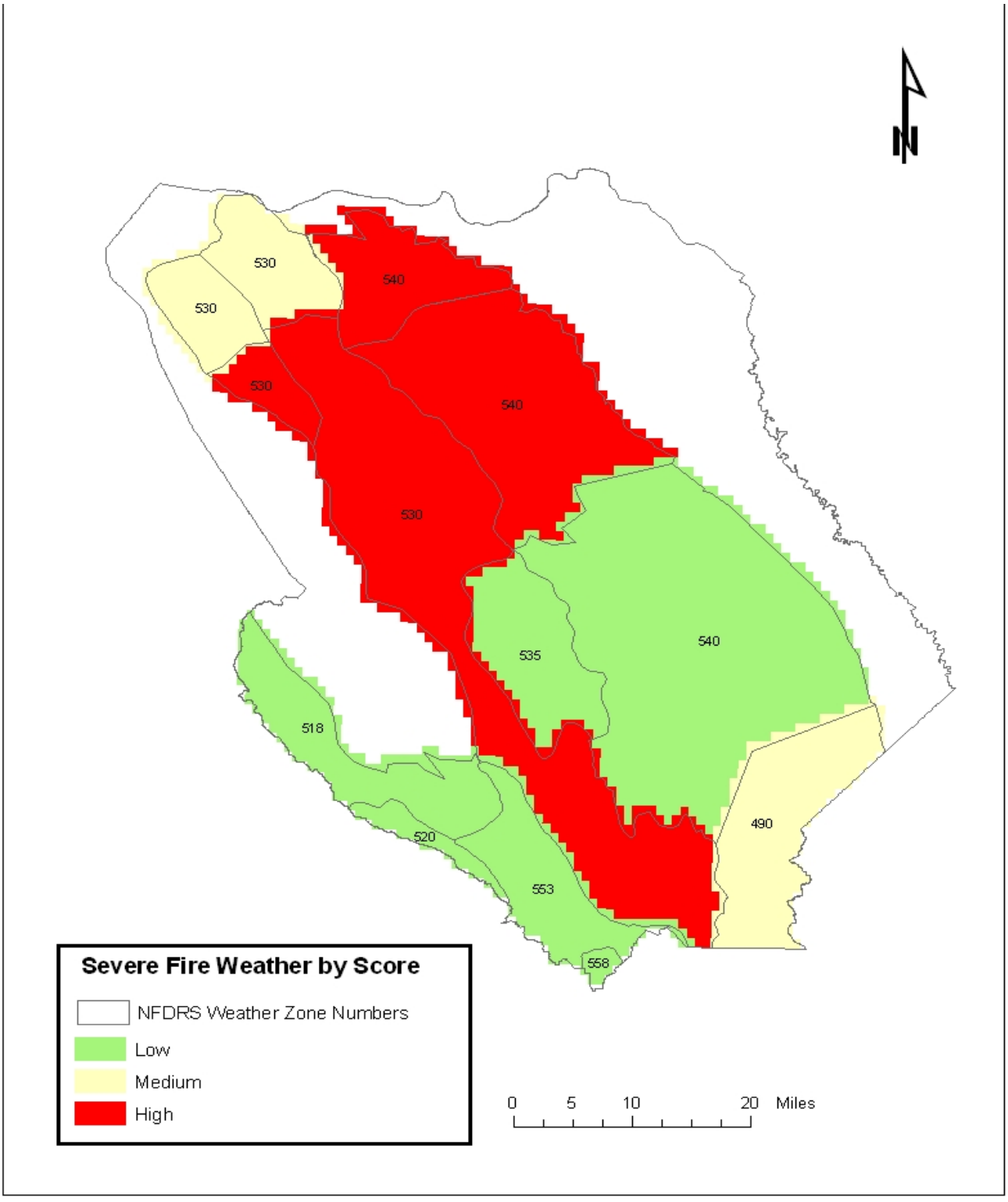
## Level of Service by Fuel Planning Belt



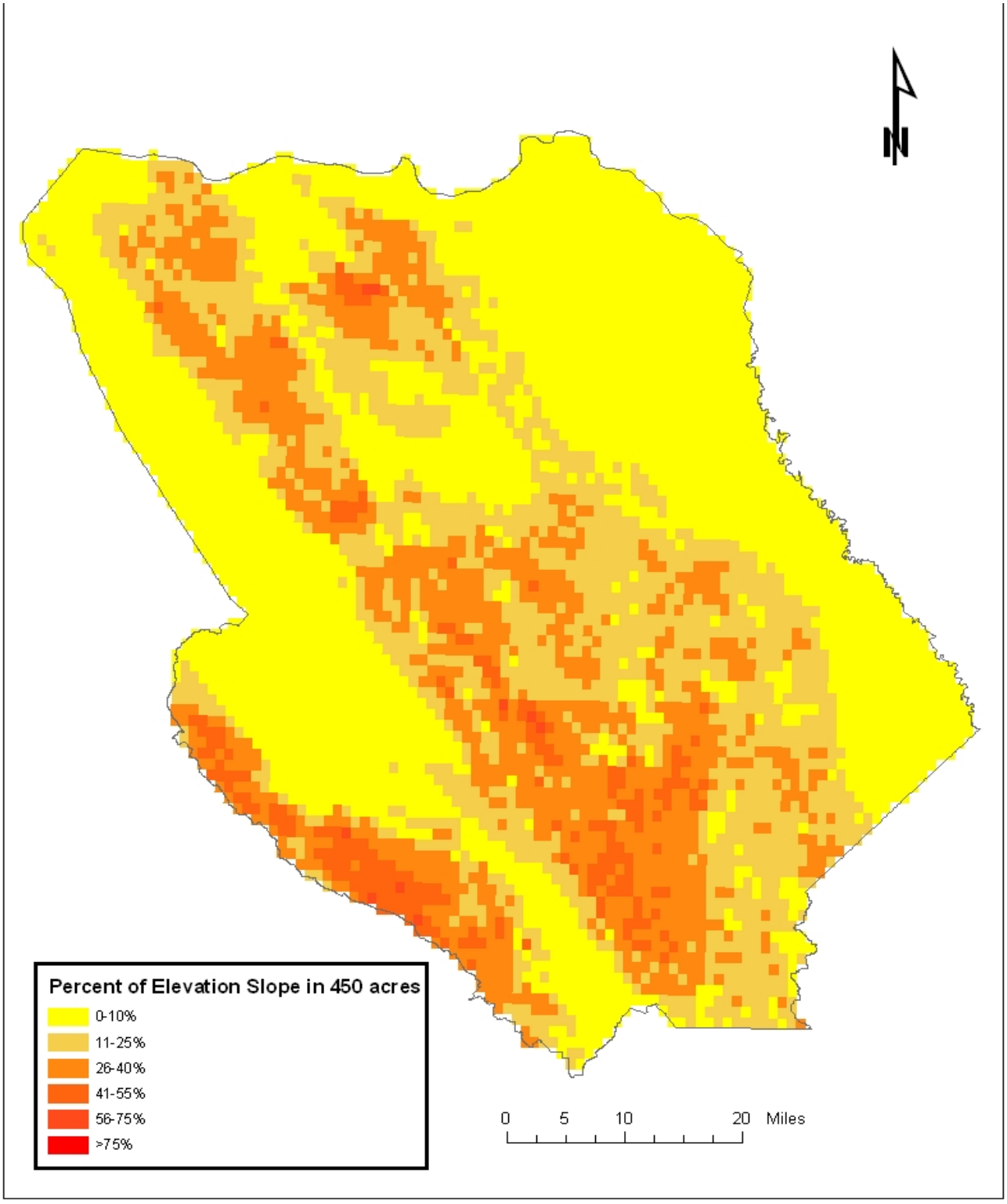
## Severe Fire Weather by NFDRS Zones



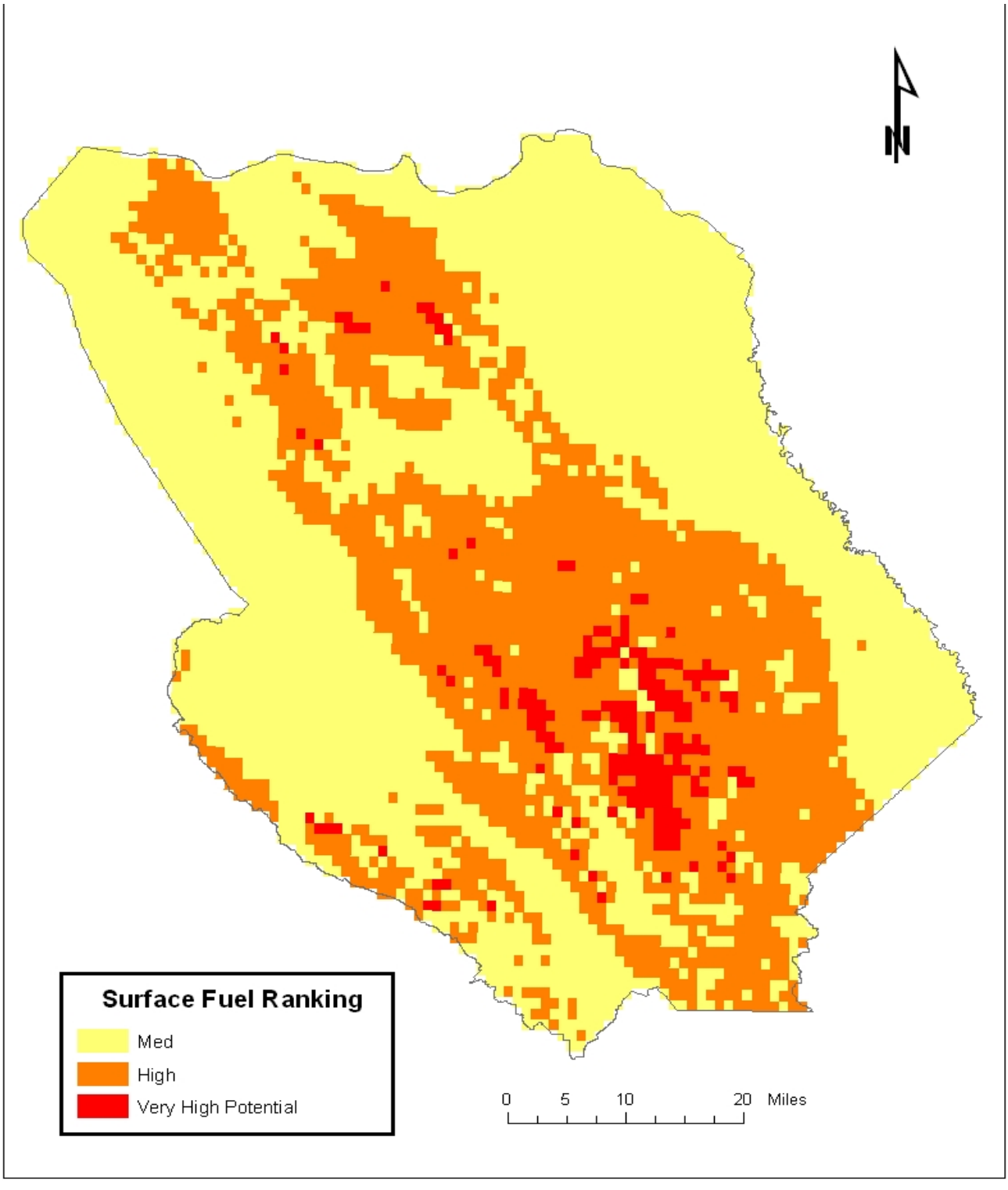
**Severe Fire Weather by Score**



**Slope Class**


N
Percent of Elevation Slope in 450 acres
0-10%
11-25%
26-40%
41-55%
56-75%
>75%
0
5
10
20
Miles

**Surface Fuel Ranking**



**Weather, Assets at Risk, Fuel, and Level of Service Calculator Results (WAFL)**